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# 122657 THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 1.

SAN FRANCISCO, SATURDAY, JULY 7, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

### Outing Scenes.

Fourth of July week, with thousands of city people out of town, and thousands of country people forsaking scenes of rural activity for the wilds of lake, mountain and forest, affords a proper occasion for turning our pictorial attention away from the lines chiefly pursued. A few camera shots of outing scenes are therefore offered herewith.

It seems to be a general complaint that the more retired avenues of vacation travel and repose are scantily peopled this year. We hear such remarks

own sake and decimate the ranks of summer idlers.

And yet the delights of air and water, forest and mountain, are being enjoyed by many, and the charms of changing scenes are not less to those who are now pursuing them. Our pictures are suggestive of some phases of far western summering. The rolling hills, with the mountains beyond, afford a breadth of view which is inspiring and uplifting. The

piles of rock refuse thrown up by some hilltop engineering bespeak the power of man to surpass mountain barriers, and the waste of rock and gravel which nature is endeavoring to conceal with forest shows the repairing by which Mother Earth covers her scars wherever

such work is possible. Two other pictures relate more directly to outing—the boats upon the lake, the temporary camp upon the hillside—and need no comment to those who are now tasting these blissful recreations.

Doubtless it is well to seek rest and recreation. One can hardly see a camp of city children, done to a brown by the warm kiss of the sun and hear their happy cries as they pursue un-

wonted pleasures in the lake or the woods, without feeling that there will be brighter eyes turned upon the books when the schools reopen and bodies better fitted to resist weakness and take on strength during a whole year afterward. What is good for the children is also good for the elders—respite from pressing duties, hunger born of the tonic of the country air and long, sound slumber caused by physical weariness amid conditions which make such weariness a blessing—all these are strong agencies to repair the nerves, sweeten the temper and lessen the gravity of life's burdens. Fortunate are they who can adopt such remedies.

ORCHARDISTS are getting much help with their fruit from city and village people who camp on the ground. The Stockton Mail says that the bulk of the San Joaquin county apricots will be dried, and many orchards contain canvas villages in which the pickers and cutters live during the drying season. In the Langford colony the tents resemble a small city and when

the peaches come in the scene will be much extended.

How to get fruit and forage from an apricot orchard is demonstrated by R. W. Williams of Woodbridge, who utilizes the prunings of his apricot trees to feed his horses and cow. He piles the prunings in the orchard until the leaves are partly cured, and then they are drawn into the corral, where they are greatly relished by the farm animals, which will often



A New Forest Upon a Waste of Rock and Gravel.

from our friends who are themselves rustivating and from those who prepare entertainment and provide facilities for comfort and maintenance in regions which usually highly please visitors. It does not seem to be a good summer boarder and summer travelers' year. There are perhaps several reasons why local resorts should be neglected. In the first place the times are full of action. People are, as a rule, busy about important concerns which promise reward for effort. There is a shortage of labor supply, and many who could steal time for recreation while their affairs proceeded under others' care, have this year to do their utmost to promote their own undertakings. Again, it is a time of unusual interest in distant activity. A large number of those with longer purses are doing Europe and the Paris Exposition; many more are seeking long purses at Alaskan points; there are hundreds of Californians in our new Oriental possessions. Last of all, perhaps, it is a general election year and candidates and their friends are very busy pipe-laying and fence-building. All these distractions and others akin to them are reducing the numbers of those who seek recreation for its



A Wooded Hilltop Above a Rock Cut.



Rolling Hills and the Distant Mountain Ridge.



A Stop for Dinner on the Hillside.



The Quiet Pleasures of the Mountain Lake.

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E. J. WICKSON..... Horticultural Editor.

San Francisco, July 7, 1900.

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## The Week.

It is Fourth of July week and, as usual, a somewhat distracted one. It is true that the metropolis does little this week in the way of celebration, having exhausted its jubilation spirit by the great welcome to the returning soldiers some months ago, but the interior towns are outdoing themselves in street fairs and Fourth of July celebrations. There are more queens in California this summer than ever before in her history, and their slaves are without number. These local events are more engrossing than metropolitan celebrations, and please more people. We are quite in sympathy with them and shall be glad to see them increase from year to year. Not only every city and town but every hamlet should have its own home celebration, and should take joy and pride in it.

Aside from the local outbursts of patriotic fervor there are other distractions which call the mind away from common industrial activities. Two great national conventions are filling the thoughts of the people and mark the beginning of a campaign which will occupy the American people for the next four months. All other news is neglected while the supreme matters of platforms and standard bearers are rife. And these domestic excitements are in competition with the thrilling events in China. It seems as if the time had really come for the final struggle between barbarism and enlightenment, and, naturally, this conflict must come where darkness lingers longest—in the vast Celestial empire. It could not have been foreseen a few years ago that the United States would be called upon to take a leading part in the struggle for enlightenment and progress in China, and yet events have brought us to that place. Now our duty is clear, and the genius of our national existence will again demonstrate its worth to the world. While such things are transpiring, it is hard to hold the thought to quiet rural affairs. Nor is it right that any part of our population should restrict its attention to its own particular affairs. In no country in the world are the industrial classes so deeply concerned in broad issues, and so competent to wisely determine concerning them, than in our own country. It is, therefore, not a distraction from current obligations but a recognition of a prime duty which leads our wealth producers to understand to what ends their industry proceeds and what public policy is for the world's greatest good. It is the recognition of this fact that makes our people strong, self-reliant and calm while the most stirring events are proceeding, and gives our people a self-control and peace

which other nations can not understand or appreciate.

The broken week and the significant events which are transpiring at home and abroad have taken the edge from current commercial transactions. Wheat is worth no less than last week, but speculation has become less active and a slow market is to-day's report. There has another cargo gone to Chili and one to Europe. Barley, too, is quiet and unchanged, with a cargo of old barley shipped out. Oats are unchanged, with the same scarcity of high grade. Corn is steady. Hay is the same as last week, except an improvement in compressed export hay, which is a little firmer. Millstuffs are in ample supply and unchanged. Mutton is higher, and veal and lamb are stiffer, while beef and pork are unchanged. Arrivals of hogs are about equal to demand for present use, and are mostly Eastern. Fancy butter is still in scant supply, and common too abundant. Cheese is cleaning up well. Eggs are slow and largely poor, with an outlook for better times for choice ranch eggs when the people get back from their outings. Poultry is moving at fair prices, as there is little strictly choice home-grown stock in sight. Potatoes and onions are moderately firm, with small arrivals, and a good demand for good stock. Old potatoes are now wanted for seed for late planting.

Fresh fruits are doing a little better; there seem to be no accumulation of good stock. Peaches are firmer. Eastern shippers are seeking Bartlett pears and will run an issue with the canners for them. Lemons are doing better. Buyers are seeking dried apricots to cover their advance sales. They are said to be taking them in the Vacaville district at 6@6½c in the sweat-box. As dealers are said to have sold from 350 to 400 carloads of apricots for future delivery at good prices, they are hunting for fruit which will not bring them rejections. It is said that almonds are being bought at 9 to 10c when they can be had, while 10c asked for walnuts is above buyers' views at present. Contracts for new hops are reported at 9@10c. Wool is still at a standstill.

## Our Agricultural Exports.

During the fiscal year ending June 30th, 1899, for the third time in the history of our foreign commerce the value of domestic agricultural products exported annually by the United States has exceeded three-fourths of a billion dollars. The first record of the kind was made in 1892, when the declared valuation amounted to \$803,122,145, or 79% of the total value of all exports, and \$72,727,202—or nearly 10%—greater than the highest previous record, which was \$730,394,943, made in 1881. Immediately following 1892 there were five years—1893-1897—during which our agricultural exports were considerably smaller, averaging but \$618,074,947. After that, in 1898, a remarkable increase occurred and the unprecedented value of \$859,018,946—or 71% of all exports—was attained. This was an increase of \$53,896,801—or nearly 7%—above the previous high water mark of 1892. Then followed 1899 with a record of \$792,811,733, or equal to 66% of the value of all domestic articles exported. This value, though less than the unusually high figures of 1898, was \$97,937,733—or 14%—greater than the annual average for the five years 1895-1899, \$110,655,070—or 18%—higher than the average of the ten years 1890-1899, and \$173,278,378—or 28%—in excess of the average of the decade 1880-1889.

It is interesting to note that while the value of agricultural products exported is increasing, the value of the products of agriculture annually imported is decreasing. The average annual value of agricultural imports decreased from \$406,365,441 for the five years 1890-1894 to \$366,964,708 for the years 1895-1899. It is still more interesting to note that the excess of agricultural exports over imports has made auspicious gains. During the years 1890-1894, the average annual excess was \$263,278,428. This average annual excess was increased during the period 1895-1899 to \$327,909,292, a gain of \$64,630,864, or 24%.

While the value of domestic agricultural products exported in 1899 was \$66,207,213, or nearly 8% less than the exceptionally high figures for 1898, it exceeded all prior records, except for 1892—a year notable for its remarkably abundant crops in America, accompanied by a general deficiency

abroad. During 1898 conditions somewhat similar to those recounted for 1892 prevailed, but to a less marked extent, resulting in unusually heavy exportations of breadstuffs. Under the more normal conditions of 1899, our breadstuff exports were considerably smaller. In the latter year the value of breadstuffs shipped to foreign countries amounted to \$273,999,699, as against \$333,897,119 in 1898. This falling off in breadstuff exports, together with a loss of \$20,863,643 in the value of cotton shipments, more than accounts for the total decrease in agricultural exports.

After breadstuffs, cotton, and meat products, which always form by far the most important items in our agricultural export trade, the principal exports for the fiscal year 1899, in the order of their value, were live animals, tobacco, oil cake and oil cake meal, vegetable oils, fruits and nuts, dairy products, and seeds. These ten leading items comprise in value over 95%, while the group consisting of breadstuffs, cotton and meat products constitute more than 80% of the total exports of agricultural produce during 1899.

Although less by \$59,897,420 than those in 1898, the value of breadstuffs exported in 1899 appears unusually high when contrasted with the average of earlier years. Figures of the U. S. Department of Agriculture show that there was a gain of \$61,656,537, or 29% over the average annual value for the period 1895-1899, and a gain of \$72,878,060, or 35% over the average annual value for the ten years 1890-1899.

Wheat was the principal factor causing decline in exportations of the last two years under consideration, although in the case of wheat flour there was a considerable increase. Of wheat there were 139,432,815 bushels exported in 1899, a gain of 38,637,039 bushels—or 38%—over the annual average of the five years 1895-1899, and a gain of 42,801,297 bushels—or 44%—over the annual average for the years 1890-1899. Although making such a splendid gain over average years, the 1899 shipments were 8,798,446 bushels short of the exceptionally heavy exports recorded for the preceding year. The decline in price intensified this shortage. The export price per bushel, which averaged as high as 98.3 cents during 1898, declined in 1899 to 74.8 cents, and this fact accounts largely for the falling off of \$41,415,490 in the total value of exports.

The quantity of wheat flour sent to foreign markets during 1899 was 18,485,690 barrels, or 3,135,747 barrels more than in the previous year, 2,826,703 barrels—or 18%—more than the annual average of the years 1895-1899, and 3,430,931 barrels—or 22%—more than the annual average of the decade 1890-1899. Notwithstanding a decline from \$4.51 to \$3.95 per barrel in the average annual export price, the total value of the flour shipments advanced from \$69,263,718 in 1898 to \$73,093,870 in 1899.

In the exportation of meat products there was a considerable increase during 1899, the value of shipments for the year amounting to \$166,679,166, or \$9,552,624 in excess of the record for the preceding year, \$25,178,075—or 18%—greater than the annual average for the period 1895-1899 and \$31,231,377—or 23%—more than the annual average for the decade 1890-1899. The largest gains occurred in the case of hog products, and especially pork and lard. The total value of hog products exported advanced from \$110,801,151 in 1898 to \$115,179,343 in the succeeding year, \$18,752,690—or 18%—more than the annual average of the years 1895-1899 and \$23,636,533—or 25%—more than the average for the years 1890-1899. In beef products there was a gain of \$2,181,230 during the year 1899, the value rising from \$31,906,384 to \$34,087,614. Oleo oil showed a considerable increase, while in the shipments of bacon there was a noticeable falling off.

There was a falling off during 1899 in the exportation of dairy products. The year before, products of the dairy worth \$9,095,759 were marketed abroad, but in 1899 the value of the shipments fell to \$7,629,211. This decline is the more accentuated when it is noted that the average annual exports of these products for the years 1895-1899 was \$7,862,358, and \$9,171,804 for the ten years 1890-1899.

A table of agricultural exports for 1899 enumerates forty-one articles having a valuation exceeding \$1,000,000. Of these, twenty-six show larger exports for 1899 and fifteen smaller.



QUERIES AND REPLIES.

Drouth and Scale Stricken Trees.

TO THE EDITOR:—I have 200 apricot trees and 100 peach trees 8 years old. The black scale has shown itself in large quantity since March. Combined with the drouth and scale the fruit is now withering. A small per cent will mature on lower limbs. I believe the trees should be stripped of all fruit. Would you advise cutting all the trees back to the main trunk about three feet from the ground? If that be done when should I do it? Would the gas treatment be more effective than spraying? If so, can you inform me the cost of apparatus and treatment? If spraying would be the best, what material or mixture is best to use and when?—GROWER, Monterey county.

The first thing to do, as you imagine, for the relief of trees severely suffering from drouth is to remove the fruit; the next thing is to reduce the evaporating surface of the tree, which should be done by cutting back, and the sooner it is done the better. It is not advisable or necessary to cut back to the main trunk, but rather shorten in the branches, removing, perhaps, one-half of the top of the tree, leaving small branches wherever possible to continue the growth and to serve as a foundation for new shoots next season. In this way you can get a better shaped tree than by cutting back to the main stem. After cutting back you can treat the scale by spraying quite effectively, because of the reduced surface to be treated. The fumigation process is the best treatment for the black scale, but as yet it has not been applied to deciduous fruit trees because of the cost. Apply to the University for pamphlet, giving a full description of the process of fumigation. For spraying, the kerosene emulsion, or the resin wash, would either of them be quite satisfactory at this time of the year for this scale, because you will have the tops so reduced that you can make a very thorough application.

What Will Do on Satsuma.

TO THE EDITOR:—I have about 300 eight-year-old Satsuma plum trees, and wish to work a number of them over to some better variety or varieties. I did not wish to continue in the shipping business, and acting on advice I grafted thirteen over to Robe de Sergeant. The grafts are now in their second year, and indicate by a number blowing out that they are not altogether suited to the stock. Would budding be better? Have you any information as to other varieties on Satsuma?—E. EADEN COOK, Napa.

We cannot tell what will succeed best upon the Satsuma stock, because we are not aware that any amount of experience has been had as yet. It may be taken for granted that any of the several Japanese plums would be likely to succeed, and most ordinary European plums would also succeed, but those Europeans which, like the Robe de Sergeant, do not take kindly to the peach might, theoretically, be expected to dislike the Japanese plums, which have a certain similitude to the peach. The only sure guide in these matters of affinities in grafting is the teaching of experience. We should like to know what others can say of their results in various workings on the Satsuma. As for comparative results by budding and grafting, in some cases budding produces a stronger joint than grafting, but not as a rule. Where there is any question about the success of a variety we would rather trust a good graft than a bud.

Beneficial Insects.

TO THE EDITOR:—I have a thousand olive trees which are troubled with scale. I hear that you have sent bugs to a man not far from here, and would be pleased if you would send me some.—GROWER, Sonoma county.

The distribution of beneficial insects to work upon the scale is made by Alexander Crow from the branch office of the State Board of Horticulture, Jackson-street wharf, San Francisco. Any correspondence with reference to beneficial insects addressed to him will receive careful attention.

Castor Bean Growing.

TO THE EDITOR:—Can you give information on the culture of castor beans, how to raise them and what their market value is? Are there any raised in this State?—G. I. GREEN, Zamora.

There are very few castor beans grown in this State at present, though there were considerable amounts a quarter of a century ago. The competition with the Asiatic beans brought the price to such a low point that California growers did not find profit

in them. The beans are not difficult to grow except that the plant is very large and requires much room. But the difficulty comes in the harvesting, because the crop does not all ripen at the same time. The clusters have to be cut off by hand and kept in the sun until sufficiently dry to open and allow the beans to pop out. The harvesting then covers considerable time, and one has to go through the field again and again. This necessitates so much work that it is impossible to produce the crop in competition with the cheaper labor of the Asiatic countries, which can be brought to this port at low cost. This is about the situation as we understand it.

California Lands Wanted.

TO THE EDITOR:—I desire information on the subject of citrus fruit growing in your State. The end in view is to get information as to where the different fruits, such as oranges, lemons, prunes and figs, can be best grown, and also to learn where such land can be bought reasonably. I would like especially to know what can be best grown in the vicinity around Oakland, Cal., and the price of land suitable—within 10 to 20 miles of that city—for fruit growing or for other purposes.—T. C. MATHEWS, Eskridge, Kansas.

There has just been published by B. M. Lelong, secretary of the State Board of Horticulture, Sacramento, a very complete and interesting pamphlet on citrus fruit culture in California. So long as the supply lasts he will endeavor to send copies to all applicants. Further information about citrus fruits and figs, prunes and other California fruits can be had from the book "California Fruits and How to Grow Them," published by the PACIFIC RURAL PRESS.

Our fruit regions are widely scattered over the State, and it is impossible to tell, except by personal investigation at the time, at which point fruit lands can be obtained to the best advantage. The fruit region nearest to Oakland is south of that city, beginning at a point about 10 miles distant and extending southward to San Jose and beyond. The fruits chiefly grown in this district are cherries, apricots, peaches, prunes, pears and a general collection of small fruits on proper soils. It is not a citrus fruit region on a commercial scale. We publish your full address, and we have no doubt many having California lands for sale will take the hint to send you prices and descriptions.

Six-Rowed Barley.

TO THE EDITOR:—I enclose a head of barley commonly raised in this vicinity. This has six rows around the head. Farmers here are interested to learn if this is the six-rowed barley mentioned lately in the PACIFIC RURAL PRESS.—OLD SUBSCRIBER, Colusa.

The sample is a six-rowed barley and is pronounced by the brewing expert who started this discussion to be the kind he had in mind. The comparative superiority claimed for this class of barleys is not yet clearly made out, for there are questions of malting and brewing involved in it which are not quite clear. We have no data at present for continuing the discussion.

Soft Orange Scale.

TO THE EDITOR:—I send you a couple of twigs of orange leaves showing an infection of scale. Kindly advise what kind of spray to use on them. I have only twelve trees, but they are large, thrifty trees and I want to take care of them.—AMATEUR, Solano Co.

Your orange trees are affected with the soft orange scale (*Lecanium hesperidum*). It is very common on citrus trees and is fortunately one of the least injurious of the scales, because it is easily killed and usually freely parasitized. You can reduce it satisfactorily by spraying with kerosene emulsion or resin wash, taking care that the spray shall reach all parts of the foliage.

Kafir Corn for Light River Bottom.

TO THE EDITOR:—I have been thinking of planting Kafir corn on some level land adjoining the Santa Ynez river. There is strong wind there which drifts the light soil. I want it for cattle feed, possibly also for hogs. Will you give me any information you have, also tell me the best variety. In what section of the State is it chiefly grown?—READER.

There is every reason to think that the sorghum would serve you well on the lands which you indicate near the Santa Ynez river. If there is now moisture enough in the soil to germinate the seed you will get quite a growth for forage purposes before the frosts come. Kafir corn is apparently the best of the sorghum group for California, although several other

varieties are grown. The plant is best suited to the interior valley conditions, as it delights in great heat and withstands drouth admirably. The largest amount of the plant is grown in the Sacramento and San Joaquin valleys, through a north and south distance of something like 400 miles. It is now so late that you could hardly find seed in the hands of the grower, and for experimental purposes it would be best to secure it from the seedsmen and get it into the ground as soon as possible.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending July 2, 1900.

ALEXANDER MCADIE, Forecast Official and Station Director.

SACRAMENTO VALLEY.

Favorable crop conditions prevailed during the week until Saturday, when a severe norther occurred in portions of the valley, causing wheat to shrivel and shell out. Grain harvest is in progress; the yield is generally very good, but on account of a smaller acreage than usual in some places, the crop will be less than last season's. Heavy dews at night have benefitted alfalfa. The deciduous fruit crop is being gathered and shipped. Prunes, peaches and pears are yielding large crops; the apple crop in the foothill districts will be the largest ever gathered; apricots are a fair crop in some localities. Prospects are good for an unusually large crop of oranges at Palermo.

COAST AND BAY SECTIONS.

The temperature has been above normal, and conditions have been favorable for all crops. Harvesting and thrashing are progressing. Wheat and barley are of excellent quality, and the yield generally fair, though less than average. Rust is injuring grain and hay in some of the northern coast counties. Corn, hops and vegetables are doing well. Pasturage continues good. In some sections apples are being seriously damaged by codlin moth. Deciduous fruits are ripening and being gathered; many orchardists are engaged in drying apricots and deciduous fruits. Grapes are in good condition.

SAN JOAQUIN VALLEY.

Clear, warm weather during the week has been favorable for ripening and harvesting of all crops. Wheat and barley harvesting are progressing rapidly; the yield and quality are generally highly satisfactory, except in some portions of the extreme northern end of the valley, where barley is reported somewhat shriveled. Drying of apricots is progressing. Tragedy prunes and Bartlett pears are being marketed. Fruits of all kinds are ripening rapidly, and prospects are very good both as to quantity and quality. Lemon shipments have commenced in the vicinity of Porterville. Sweet potatoes are doing fine, and the present outlook is for a large crop. Fruit and alfalfa are being extensively irrigated.

SOUTHERN CALIFORNIA.

Warm days, and cool, cloudy nights, with considerable fog prevailed during the week, conditions being very favorable for fruit and other crops. Early apricots are nearly all gathered and are being sent to canneries; the yield is light. Other deciduous fruits are ripening slowly. Walnuts are looking well in most places. Water is getting low in ditches. Vineyards are in good condition.

LOS ANGELES SUMMARY.—Some reports state that the weather is favorable for beans, while others report it unfavorable, but the general tone is cool, cloudy or foggy and advantageous to growing crops. Showers fell Saturday and Sunday in some places and interfered with fruit drying.

EUREKA SUMMARY.—Wind is drying soil rapidly. Hay harvest is progressing finely. Grain crop, oat hay and all kinds of vegetables and fruit are generally making good growth.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Tuesday, July 3, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Minimum Temperature for the Week.....	Maximum Temperature for the Week.....
Eureka.....	.01	.01	.00	.02	50	60
Red Bluff.....	.00	.00	.00	.01	62	98
Sacramento.....	.00	.00	.00	.01	52	90
San Francisco.....	.00	.00	.00	.01	50	68
Fresno.....	.00	.00	.00	.01	58	100
Independence.....	.00	.00	.00	.01	56	98
San Luis Obispo.....	T	T	.00	T	44	84
Los Angeles.....	T	T	.00	.01	54	82
San Diego.....	.00	.00	.00	T	62	108
Yuma.....	.00	.00	.00	.04	66	108

A CONTRACT has been filed for the construction of one of the largest, if not the largest, wine cellar in California. It will have a storage and handling capacity of 2,750,000 gallons. The immense wine vaults are to be located on Brannan street, between Third and Fourth, and will be used by the California Wine Association under a long lease. The most important part of the building will be underground, being an immense concrete cellar, with a two-story superstructure of brick faced with terra cotta.



## HORTICULTURE.

### Condition of Olive Culture in California.

Last week we gave an outline of the cultural conditions the absence of which are alleged by Prof. A. P. Hayne as the cause of the disappointment with the olive. Prof. Hayne also cites several commercial conditions which need the closest attention of olive growers.

**DEMAND FOR OLIVE OIL.**—The greatest difficulty seems to be found in disposing of California olive oil at remunerative prices. While there are some oil makers who, after years of patient and expensive struggle, have created a paying market, the majority seem to lose money on oil making and are very much discouraged. While they themselves are, in many cases, chiefly to blame for putting on the market rancid or poorly made oil, it is equally true that even some of the best oil is with difficulty sold on account of the competition with cottonseed oil. The cottonseed oil is not sold as such, but when flavored with some genuine oil, either as "Pure California Oil," "Pure Olive Oil," "Pure Lucca Table Oil," "Pure Sweet Oil," "Salad Oil," or some such designation whereby the public is deceived. It is beyond dispute that the public has the intention of purchasing "olive oil" when they are buying "salad oil" or "sweet oil," and it is equally true that shameful deceptions are practiced. The olive oil maker has absolutely no protection from the unscrupulous seller of cottonseed oil. Olive oil cannot be made profitable unless the grower can receive 75 cents per quart for his product, for it costs him almost that to manufacture it. On the other hand, cottonseed oil can be sold at a large profit at 10 cents per quart. Aside, then, from the imperfect methods that in many instances prevail, there is at present but a small demand for the high-priced olive oil of even some well-known grower who has earned a reputation for honesty. The peculiar value of olive oil for medicinal and hygienic uses has been established for centuries the world over and is daily becoming more esteemed. To say the least, nothing is known concerning medicinal properties of cottonseed oil.

In passing, it must be noted that those who would buy olive oil are too often so anxious to save a few cents that they materially assist the fraudulent dealers in cottonseed oil, under its various disguises, by attempting to buy for 25 cents what costs 40 cents to manufacture. Those who have created a market for pure high-priced oil, sell it all; but there are unfortunately few such. Mr. Ellwood Cooper sold every gallon of his oil last year at his own price; but it took him twenty years and a great deal of money to be able to do so. There are oil makers in Oroville and Auburn, and in Contra Costa, Santa Clara, San Diego, and other counties, who have succeeded in making oil profitable in the same way.

The cost of oil machinery, and the necessity of creating a market in face of the difficulties just mentioned, should deter those with small capital from going into olive planting with the idea of making oil for profit.

**ADULTERATION OF IMPORTED OILS.**—The danger of competition from cheap foreign olive oils is not considerable. The real danger arises from these cheap olive oils losing their identity in 80% or 90% of cottonseed oil, which is either mixed with it on arriving in the United States, or in such famous places as Nice, Marseilles, Lucca, Leghorn, etc. The writer in 1893 called attention to the extensive use of cottonseed oil as an adulterant in both export and domestic foreign oils. While the imputation has been very vigorously resented by the Chamber of Commerce of Nice and a few others, it is nevertheless true that this practice has increased and is increasing rapidly. The writer has seen it practiced in foreign countries. Those who believe that all foreign oils are pure, are recommended to read the protests of the Nice oil makers (made in 1889-92 to the Chamber of Deputies at Paris) against the shameful adulteration of olive oil with cottonseed oil. It would seem that in late years the grower has given up protesting and gracefully mixes cottonseed with his olive oil at his oil mill or elsewhere.

There is no objection on the part of olive growers to the use of cottonseed oil, if sold as such, and not labeled "olive oil," or some deceiving mark whereby the would-be purchaser of olive buys chiefly the product of the cotton gin.

Until some national law is passed which will protect the olive grower just as the butter maker was protected by the "oleomargarine" law, the olive oil producer cannot be generally successful.

**DEMAND FOR PICKLED OLIVES.**—There is a large and growing demand for olives in the form of ripe pickles. The merchants all over the State testified to the growing demand for ripe pickled olives and stated that for large ripe olives, if sound, they would pay 75 cents per gallon f. o. b. and lower prices for smaller grades. Some paid as high as \$1.50 per gallon for the ripe pickles. The demand from the East is very large, and is growing more and more persistent. Some of the successful growers now dispose of their entire crops in Eastern markets at highly remunerative rates. The only complaint heard from

the wholesale and retail merchants concerning the pickled olive industry was that they found it impossible to secure a sufficient quantity of sound, well-keeping olives to supply their customers. There is a ready market for standard size green pickles, as well as for ripe pickles.

Olives should be grown for pickling, and pickles should be relied upon to yield the profit; while the smaller olives (just as valuable for oil making) can be disposed of to the oil maker, and thus no inconsiderable sum can be realized from small fruit, which should be regarded as a by-product only, except in cases where the grower has a mill of his own.

**UNSOUND PICKLES.**—In all that has preceded it has been assumed that the manufacturer of olive oil, or pickles, knows his business and puts upon the market only a sound, well-manufactured article. Unfortunately this is not generally the case, and because of this much loss has resulted. No manufacturer of furniture can hope for success if he uses rotten wood, neither can any one hope to make sound pickles or oil out of bruised or decayed olives; yet such practice was found in almost all parts of the State. Unsound olives are not only worthless in themselves, but contaminate and destroy the value of the rest of the crop. Self-evident as this may seem, yet it is the most important cause of failure (when failure was noted) among the olive growers of the State. It would not be so much to be regretted if the harm was done to the individual maker of unsound oil or pickles; but unfortunately it greatly injures the reputation of all California olive products, and does injury that is more dangerous and far reaching in its effects than the mere bankruptcy of one olive grower.

**PREVALENT ERRORS.**—In many cases brought to our attention either by consumers, merchants, or growers, much doubt was expressed concerning the possibility of preserving ripe olives so that they would keep sufficiently well to be shipped and consumed at a reasonable time after putting up. Many persons went so far as to maintain that a ripe olive could not be kept sound and edible for more than three months. This is a grave error. Ripe properly pickled olives can be kept for three years without any material deterioration in quality. The writer has had occasion to prove this many times in past years, as well as during the progress of the present investigation. In cases where the olives spoiled within a few months, the blame invariably lay with those who picked and pickled the olives, seldom with the merchant or consumer.

It should be understood once for all that the market will not tolerate unsound pickles. It is idle for any one to claim that he cannot pickle his olives so that they will keep in marketable condition for a year or more. The fact remains that very many do succeed in so doing, and if others do not, they should learn how. Otherwise it is probably best for the industry that they should take up some other line of work.

The causes of failure are known and avoidable. The only essential in the process is care and exactness. No careless person can ever hope to succeed. Failure simply means that there has been carelessness during the process.

**CAREFUL WORK ESSENTIAL.**—The process of pickling ripe olives seems so very simple at first glance that the grower frequently works carelessly. The common belief seems to be that there is an invariable rule by which all olives can be treated; that the element of common sense can be eliminated from the problem; and that the slipshod procedure commonly called "more-or-less method" can be practiced with impunity. It is to show the error of this idea that this article is written. So many complicating circumstances enter into the problem, requiring the exercise of so much close observation and judgment, that all the Experiment Station can do is to indicate the general lines of procedure, and the beginner against common errors. No hard-and-fast prescription can be given that will lead to success in more than a few cases.

Prof. Hayne proceeds then to discuss pickling processes in detail. As it is now out of the pickling season, we reserve his suggestions along this line for publication when they will be directly useful to our olive growing readers.

### Citrus Culture.

By JAMES BOYD, at Southern California Pomological Society.

The subject assigned me is so broad that I will not attempt to fill it completely. To do so would demand more time and space than either you or I are prepared to give. The fact that a book of 250 pages has been recently published by B. M. Lelong of the State Board of Horticulture, the most thorough and exhaustive on the subject that has ever been published, would almost of itself be sufficient to deter me from any attempt at all. No one man knows everything about any particular industry, and the fact that we are constantly learning more and more gives me courage to start on a topic which has peculiarities in every location. On this occasion I propose to touch slightly on the conditions necessary for successful citrus culture.

Practically to-day there are but two branches of

citrus culture in California—the orange and the lemon. The lime industry was at one time a very promising branch of lemon culture, but mainly on account of being more tender and susceptible to cold its cultivation has been practically abandoned, and the juice of the lemon forms a successful substitute.

The pomelo, a medicinal variety rapidly rising into favor, bids fair to be a permanent success if its peculiar properties maintain the reputation the fruit has already earned. Of the conditions for its successful growth but little is known, but time will finally determine the best conditions of soil and climate, and its successful culture will, like the orange and lemon, be in all probability confined to more or less well defined limits.

There are two conditions necessary in citrus culture as in every other product of mother earth, but the orange and lemon are perhaps more exacting in this respect than any other of the varied horticultural products of California. These two conditions are soil and climate. Assuming that the soil and climate are correct, there are a great many minor details that are so much within the reach of the orchardist himself that success in this direction becomes almost a personal matter.

**SOIL.**—The best soils for citrus culture are those in which iron is largely present, which may be known by their red color; foothill soil composed of decomposed granite, with clay enough to prevent leaching by the water used in irrigation, and having permanent water so far beneath the surface that the taproot of the tree will not be able to reach it. The soil must also be open enough to allow the water to percolate freely, so that irrigation will wet all the soil both laterally and perpendicularly so far as the deepest offshoot of the taproot may wish to extend. This means a warm, dry subsoil, without which the highest success is unattainable; and unless this condition of soil is present, sooner or later disease will supervene in the roots. A well drained, rich, warm foothill soil, then, is the first essential in California for the best success in citrus culture.

**CLIMATE.**—Of equal importance, then, is climate, which relates not merely to heat and cold, but to moisture and rainfall. Winds and air currents are other agencies that help or hinder success, for in a windy climate the fruit would be so rubbed by friction with leaves and branches as to interfere with a high grade of fruit. Plenty of sunshine and no rain in summer is imperative for high color and flavor. While a dry atmosphere is best for growth, the soil should never be allowed to dry out enough to cause the leaves to shrivel or show signs of wilting in the noonday sun.

**IRRIGATION.**—With a dry climate and soil, irrigation is necessary both in summer and winter, except when the rains in winter are abundant. No specific rules can be laid down for irrigation, except that the soil should always be damp enough to secure continuous growth, and that can be easily determined by an experienced orchardist by looking at the trees or an examination of the soil. As long as the soil is damp there is no need of irrigation, no matter how long it may have been since the last irrigation, and again, no matter how short a period has elapsed since last irrigation, whenever the soil becomes dry it must be irrigated. Occasionally in the rainy season it may rain enough to wet down a few inches and yet not sufficient to wet all the way down. Where this is the case irrigation is surely needed. In winter, however, when growth is slower, it is better to be a little sparing with water than in the growing season. This rule is not applicable where running water or a damp soil are intended to mitigate the rigors of a sharp freeze.

**CULTIVATION.**—Cultivation is the one thing that is depended on to prevent drying out of the soil and favor economy in the use of water. By a proper system of cultivation almost all the water used in irrigation may be preserved for the use of the trees. Cultivation also prevents surface absorption of the sun's rays, which, unduly warming up the surface, has an injurious effect on the surface feeders. Without cultivation the radiation of heat is also hastened in the night time, so that there is not the same uniform soil temperature maintained which favors continuous growth. Cultivation also favors absorption of warm, moisture laden air into the soil, with more or less fertilizing elements, which favor healthy growth and aid in maintaining the fertility of the soil. Cultivation should be done as often as there is any tendency of the soil to get solid, which favors drying out. Ordinarily in the irrigating season cultivation and cross-cultivation will be all that is necessary.

**FERTILIZATION.**—No matter how rich a soil may be, constant removal of the crop, with clean cultivation, will ultimately impoverish it, and in order to prevent this the elements abstracted by the fruit should be replaced. This can be done by commercial fertilizers, but they must be supplemented by some form of vegetable refuse, either stable manure or green crops plowed under. A little of both will be best, for with a light dressing of stable manure plowed in in the fall a crop of peas or other legume for plowing under will be much larger and heavier, and the mechanical effects of the roots in penetrating the hardpan, formed by constant cultivation, will tend to make it porous and more retentive of water, as well as more permeable in irrigation. As to quantities to be ap-



plied, there should always be enough commercial fertilizer applied to equal what would be taken out by the crop.

The stable manure and green fertilizer applied should equal the amount of soil elements used in tree growth. In applying commercial fertilizer it is well to be sure that the analysis is correct, for some brands on the market are dear at almost any price. Here is where a fertilizer law would benefit grower and honest manufacturer alike.

**VARIETIES.**—The successful fruit grower always has the best varieties and the best quality of fruit. It is only by the most incessant vigilance that a high standard can be maintained. The Navel is the standard of perfection for general planting, but there are some later varieties which may pay well, and there is reason to hope that an early variety may be originated that will extend the time of marketing and in this way increase the capacity of the market.

Wherever new orchards are being set out or old ones budded to choicer varieties, the aim should be to buy or bud only where the buds have been specially selected from the best types of tree and fruit. In this way we can attain a higher degree of excellence that will do much to prevent foreign competition.

**MARKETING.**—All labor will be lost if the proper marketing of the fruit has been neglected. The competitive system was all right as long as the packers and middlemen competed with one another for possession of the fruit, but when the supply begins to equal the demand and new markets have to be sought and consumption encouraged, this can only be done safely by co-operation. Competition for a market and underbidding for purposes of making sales demoralizes both buyer and seller, and the grower is the final sufferer, and it can only end in ruin to the industry itself.

**TRANSPORTATION.**—In order to extend the market for fruit it must be put into the consumer's hand at a price he can afford to buy. Considering that a large percentage of the gross returns goes into the hands of the transportation companies, and that fully one-half of the gross proceeds are spent between the tree and the consumer, any method that will reduce the charges will tend to increase the market. Railroad companies charge more for hauling a carload of fruit now than they did a few years ago, and allowing that the net weight is more, by the employment of better materials in car structure the gross weight is probably as little or even less than it was when 300 boxes was a full carload. Economy in this as in all other directions would inure to the benefit of all. Other railroads are reaching out for the profits of hauling our citrus fruits, which may, unless trusts are formed, help the business somewhat, but it will be the part of wisdom for the grower to look out for himself and not trust to others in this age of every one for himself.

**LEMONS.**—A word as to the lemon. As the California lemon becomes better known it is coming more into favor. Conditions for lemon culture are different from that of oranges. The interior grows a good long-keeping lemon, with the season for a crop more like the orange. On the coast, with its damper and mild atmosphere, the lemon is more a continuous bearer, with a climate less favorable to long keeping. By common consent the orange is not quite as successful on the coast as in the interior, and so it comes that the coast is making more of a specialty of the lemon. The market for this fruit, like the orange, is constantly extending. The supply in many cases creates the demand. The luxury of yesterday becomes a necessity to-day, and so the market increases year by year, and the whole business of citrus fruit growing will ultimately settle on a solid basis, in which the element of speculation and extremely high profits will be eliminated and fruit growing on a family scale or in small tracts will afford many a family the health, happiness and means of living they vainly strove for elsewhere.

## THE SWINE YARD.

### Hog Raising in the Northwest.

We have a profound conviction and have frequently expressed it in these columns that California should give more attention to animal products, both for home use and for export. We find it very difficult to induce our readers to engage in discussion of these subjects with anything like the freedom shown by fruit growers in the promotion of their business. It is a fact that the upper States of our coast are advancing in stock farming more rapidly than we are, and though this is perhaps to be expected because they have a narrower range in horticultural lines, it is still a fact that, with our favoring conditions, leadership should not be conceded to them.

In advancing our swine interest we can take pertinent suggestions from their experience. Prof. H. T. French of Idaho has just written for the U. S. Department of Agriculture a sketch of upper coast practice which in many respects is directly suggestive of improved practice for us, and, where not applicable, the California practitioner can readily make

needed modifications. For this reason we shall reproduce Prof. French's sketch, hoping thereby to excite our own swine breeders to conference through our columns, which are always open to them.

**OUR SITUATION.**—We occupy that part of the United States which is farthest away from the source of supply of pure-bred stock. The countries of Europe are comparatively nearer than we are to the Atlantic seaboard—much nearer when the convenience of transportation is taken into account. This long and costly transportation is one of the hindrances to the introduction of blooded stock into the far West. It is true that within the past few years it has been possible to obtain pure-bred stock much nearer home—in the Middle Western States—and we are gradually realizing marked benefit from this westward movement of improved breeds of stock. Among the live stock interests there is none, perhaps, more neglected and trampled under foot than that of raising hogs. This is true for several reasons, chief of which is that men come to this Western slope, and, finding that corn is not as easily grown as wheat or can not be grown at all, conclude that hogs can not be successfully handled. It is told of a farmer in a certain wheat growing section that when the price of wheat advanced to 60 cents a bushel, he took his hammer, knocked a hundred pigs in the head and buried them, not realizing that some other cheaper grain might have taken the place of wheat, which, supplemented with some other green feed, would have placed his hogs on the market in good condition and at a profit. This, no doubt, is an extreme case, but it illustrates the tendency to neglect every other consideration when wheat sells at paying prices.

A few years ago it was a common practice for farmers to buy lard, ham and bacon of the grocer, who imported these products from the great meat packing centers. This habit is still followed in many sections where wheat constitutes the chief crop grown. When the price of wheat fell to 30 cents per bushel, the farmer—or rancher, as he is termed in the West—of sheer necessity turned to the feeding of hogs; but, when wheat advanced to 40 and 50 cents and hogs were a drug on the market, farmers let go of the pig raising problem and again turned their whole attention to growing wheat. So generally is this true that to-day we are importing large quantities of pork products, hogs are worth 5 cents per pound on foot and the farmer has none to sell. As already indicated, corn can not enter into consideration as a food for hogs over large areas of this Western slope. Although in many sections the climatic conditions are not favorable for its growth, much more might be grown, and there is a rapid increase in the area devoted to this crop, grown both for grain and for green fodder to be stored in the silo. Many sections, including the irrigated districts, are raising as fine crops of corn as can be grown anywhere, not excepting the great corn belt; but these areas are as yet limited, and, as an industry for this section, corn raising has not yet passed the experimental stage.

The idea seems not to have gained a permanent footing that hogs can be successfully and profitably grown on other crops than corn or wheat. When wheat is high we can not expect farmers to feed it to animals; but we can reasonably anticipate that he will turn his attention to feeding other grains to hogs, and thus supply at least the local demand for pork products. In some sections farmers are learning to grow more forage plants, such as peas, clover, vetch, rape and other pasture crops for hogs.

**BREEDS AND BREEDING.**—On the Pacific slope much good food has been lost by feeding it to inferior animals. In a statistical inquiry relative to the hog industry a few years ago, more than 75% of the correspondents reported that the scrub hog prevailed. Within the past five or six years, however, great improvement has been wrought among the herds of swine found in the West. Berkshire and Poland-China blood predominates in the West. Chester-white, Duroc-Jersey and Essex stock are also found scattered over these States. Recently the Yorkshire has been brought to the Pacific coast for breeding purposes. As a whole, little attention has been given to keeping the breeds pure. Blood will tell in pigs, as in any other kind of live stock. The old saying that "the breed is in the swill pail" or "in the corn crib" is no longer taken for more than half the truth among intelligent agriculturists. There is no breed of live stock which responds to the introduction of good blood quicker than hogs. The breeding of common-stock sows to pure sires of any of the well known breeds, coupled with good feeding, will in a few generations produce nearly as valuable a pig for practical results as pure-bred animals on both sides. Cross-bred pigs of the Berkshire-Poland-China type have given very satisfactory results. Better returns, however, can be realized by keeping the breeds pure or by grading up with pure-bred sires. But the grading should be "up," and not "down," and this requires the best sires of pure blood.

A good sow is all important in obtaining satisfactory results. The sow must be a good milk producer. She must be a good mother in every sense of the term. Preference should be given to the sow having a rather long body, well developed udder, teats evenly placed and plenty of them, ribs well sprung, and standing squarely on her legs, with hoofs upright.

A sow, or any other breeding animal, with feet like sled-runners should be avoided. Such animals will break down when required to carry the extra weight necessary at the fattening period. A brood sow bordering on the coarse order as she advances in age is preferable to a small, too-finely bred animal. The close, trim, compact sow will not give as satisfactory results as the type mentioned above. In selecting breeding animals of any kind of live stock one general rule will apply: Select animals which will represent the type desired as closely as possible.

**QUALITY OF PRODUCT.**—The demand to-day is for a carcass with fat evenly distributed and not too thick on the back and shoulders and having a large percentage of lean meat. When cut down the back, the fat should be as nearly as possible the same thickness throughout. Fat 1½ inches thick and evenly distributed is more desirable than a heavier covering, especially if it is thicker at the shoulder than along the back. Hogs with heavy, thick fat over the shoulder are not of the type sought after in the markets to-day, especially for export trade.

More attention should be given to the quality of the production in pork than in all other kinds of meat. This is especially true in the Northwest, where our reputation for pork products is yet to be established. There are no precedents before us, and the foundation in breeding and feeding is yet to be laid. The matter of quality of product as affected by feed is a very important problem, and one which has not yet been solved by any means. That breeding proper types and forms is a very important consideration all admit; but of equally great importance is the matter of feed, as affecting the quality of the product.

**CLOVER AND ALFALFA PASTURES.**—Common red clover is one of the most desirable forage plants for hogs and the one most commonly used in sections where it has been tried. Throughout western Oregon, Washington and parts of Idaho red clover will grow to great perfection. Even in the irrigated sections of those States farmers are learning that red clover is a valuable crop. It is often mixed with alfalfa, giving good results. It will start quicker than alfalfa and helps to furnish a variety, which is always desirable. Red clover will not furnish as much succulent food as alfalfa, for it will not make so many growths and will not remain in green so long.

In some parts of the grain regions of eastern Washington and northern Idaho clover is claiming considerable attention. In the celebrated Palouse region, which is noted for its grain product, red clover is gradually gaining a foothold. In the vicinity of Moscow, Idaho, clover yielded last season from thirteen to eighteen tons of green forage per acre at a single cutting. These figures were obtained by careful weights and measurements in the field. A crop of clover like this would furnish one of the most valuable sources of food for pigs, both as to cheapness and excellence of material. In this way pigs can be pastured until the grain fields are ready for grazing. In many sections fences are not provided to turn pigs, but this is a matter which can be overcome at no great expense.

**A WESTERN PLAN.**—Where clover or alfalfa pasture is available the following plan may be recommended: Have the pigs farrowed about March 1. In six weeks turn sow and pigs on pasture, which, with a good supply of pure water and a little shorts, will keep the pigs growing very rapidly. With good pasturage, supplemented with grain or slop, including skimmed milk or whey, it is advisable to let the pigs run with the sow until ten weeks old. The time should, however, be governed somewhat by the condition of the sow and the growth of the pigs. The weather conditions also should be taken into account. If the weather is stormy and cold the pigs will do better to run with the sow for a few days longer. The sow and pigs should be fed on slops made with shorts, or rather mill feed, and water, before the pasture is ready to turn into. Skim milk will add to the value of this diet in sections where it is available. As a result of both experiments and practical experience, it may be said that a small ration of grain is very desirable, in fact, almost imperative, with clover or alfalfa pasture or with any other green forage product. This will take the pigs through the summer till the time the stubble fields are ready to glean. At this point the grain farmer who has no pigs to clean up the scattered grain suffers quite a loss. In this Western country there is less care in harvesting, and hence the greater need of some stock to save the grain left in the field. The hogs can be sold directly from the stubble field, or, better, unless the market is very attractive, they may be taken from the stubble, finished with ground grain and placed on the market later in the season. The market is usually a little surer just before cold weather begins than it is a short time after. Pigs treated in this way can be made to weigh 250 to 300 pounds at 8½ to 9 months of age. Pork made in this way will be all that can be desired in quality, if good animals are employed in its production. An acre of alfalfa or clover pasture fed in this way ought to produce from 600 to 650 pounds of pork.

**ALFALFA HAY.**—It is not uncommon practice to feed hogs on alfalfa hay, supplemented with grain. Alfalfa fed in this way aids digestion and causes the hogs to make greater gains than on grain alone.



Hogs fed at the Kansas Experiment Station made a gain of 3.4 pounds for every 7.83 pounds of dry alfalfa over those fed on grain alone. In the report on this experiment the statement is made "that the gain from alfalfa hay with Kafir corn meal fed dry over meal alone fed dry was more than 73%." These facts indicate that there are very satisfactory results to be obtained in a practical way from feeding alfalfa hay as a part ration for hogs. There are certain sections in Washington, Oregon and Idaho where alfalfa is the chief crop, and in such localities these figures will be of special interest.

From May to August is the critical time for pigs in grain growing sections. The pigs are often compelled during this period to hunt for a living, either in small enclosures or in larger scantily productive pastures. Some very good pastures for pigs have been made by sowing winter wheat in the spring. If there is sufficient moisture the wheat will keep green and make a dense covering of succulent food. Pigs will not thrive in a pasture that is not green and fresh. Cabbage, rape and vetch are excellent crops to supply succulent feed, especially the two latter crops. Rape will grow early in the season and make a cheap succulent crop, which the pigs will relish and thrive upon. In parts of Oregon and Washington the rape crop is being grown quite extensively for hog pasture.

**VETCH.**—Experiments conducted at the Oregon Experiment Station in 1894 and 1895 showed very favorable results from feeding vetch or tares (*vicia sativa*). In this feeding test pigs were fed on green vetch, with a part ration of shorts, from May 30 to July 28. During this time the animals made fair gains in growth, and thus were prevented at small cost from being stunted, as many pigs do during this period. The vetch should be sown in the fall or winter throughout western Oregon and Washington. It may be sown in the spring, but the crop will be late. The most economical way to feed the vetch is to cut the material and feed it in pens or yards. In pasturing the crop, there is too much waste unless care is taken not to let the animals run over too large an area at one time.

**PEAS AND OATS.**—Peas and oats mixed make a very good growth in many sections of the West and furnish an excellent green food for hogs. This crop can be cut and fed in pens or can be pastured off with less waste than is the case with vetch. Some farmers have been very successful in summer feeding in this way. Peas should be sown as soon in the spring as the ground will work well, or in the fall in California valleys. Good, rich soil that will not bake too much is the best adapted to growing peas. Sow two bushels per acre broadcast and with a disk harrow or plow cover to a depth of 3 or 4 inches. After a week or ten days sow one-half bushel of oats per acre and cover with a light smoothing harrow. This will level the ground, leave the peas at the proper depth, and at the same time break up the surface of the ground so that the peas may come up more readily. The oats sown after the peas have germinated will not be as likely to get the start of the peas. The oats grow faster at first than the peas, and thus have a tendency to choke them out. In sections where wild oats are plentiful, the harrowing will be of great advantage in killing the oats which have started to come up.

**MIXED RATIONS FOR HOGS.**—To determine the feeding value of a mixed grain ration as compared with one of a single kind of grain, numerous experiments have been conducted, and in every case the results favor a mixed ration. This is one strong reason why a superior quality of pork can be produced in the Northwest, where such a large variety of grains and forage plants can be grown.

In corn growing sections there is a disposition to feed corn almost exclusively on account of its cheapness, its fattening qualities and the relish with which it is eaten. While in many sections we can not grow corn successfully as a grain crop, we can grow a list of other cereals, such as oats, barley, wheat, millet and rye; and we can grow them cheaply with very little danger of failure. As no artificial fertilizer is needed to grow these crops in the Northwest, the cost of production is low enough to make them cheap stock foods. A mixture of chopped wheat, oats and shorts will give better results than a single grain of any sort, not excepting corn. A mixture of this kind is usually cheaper than wheat alone, and will produce better gains. Chopped oats should not be fed alone. The hulls interfere very materially with its value as food for hogs. They do not enjoy the hulls, and will refuse to eat the oats quicker than any other grain except bran, which they do not relish, principally for the same reason. Chopped barley and shorts make a good combination for feeding. A small amount of bran can be used to good advantage when mixed with other grains. Shorts alone will not furnish mineral matter enough for growing pigs.

**GRAIN SHOULD BE GROUND.**—Small grain should be crushed or ground for hogs. When fed whole there is less gain to amount of food consumed, and the total gain in a given time will be less. It is a too common practice among farmers in this section to allow slovenly methods in feeding stock. Instead of getting a few feet of cheap lumber for a floor on which to feed, or making a few troughs, whole grain is strewn on

the ground for the hogs to gather up as best they may. Often the rainy season begins before the hogs are sold; then the feed yard becomes a slough of mud out of which the animals work very assiduously to gather their daily food. This may be an extreme picture, but who has not seen it many times in this Western country?

In feeding experiments carried on at the Oregon Experiment Station in 1892, it was found that it required 1.2 pounds more of whole wheat and oats to produce a pound in gain of live weight than it did with ground grain fed under the same conditions. In many cases the excreta were examined to determine the amount of undigested whole wheat present, and it was found that as much as 50% passed off unmasticated. This condition was more marked when the grain was fed dry, but at all times there was a very great loss.

**WET FEED BETTER THAN DRY.**—Hogs relish a moist diet better than a dry one, and will give better returns for the same food fed after soaking a few hours than when fed dry. Soaking grain from twelve to twenty-four hours pays well for the extra trouble in preparing the food. The old practice of permitting the feed to ferment and become a source of great annoyance, on account of the offensive odor it gives off, is no longer followed by the intelligent feeder.

**COOKING FOOD.**—The practice of cooking grain for hogs has long since been discouraged as one of doubtful economical value. Pound for pound, the raw grain will give the best results, and, when the extra cost of cooking is taken into account, the results are very much in favor of feeding the grain raw. In case of vegetables it is quite different, for the feeding value, as well as the palatability, of most vegetables is improved by cooking.

**FEEDING POTATOES.**—Very often potatoes become so cheap, on account of an increased supply, that it would pay better to feed them to hogs than to sell them on the market. Hogs can be made to gain rapidly on a ration of cooked potatoes to which is added shorts, chopped wheat, oats or barley. In experiments conducted at the Oregon station in 1896, pigs made a gain of 1.3 pounds on an average ration of 12.4 pounds of potatoes, and 2.8 pounds of chopped oats and shorts mixed half and half. The results of experiments indicate that the value of potatoes for feeding to hogs is about 10 cents per bushel. This value will vary, however, under varying conditions of market and methods of feeding.

**PUMPKINS FOR HOGS.**—Not much has been done in an experimental way in feeding pumpkins to hogs, but in practice many farmers in the West feed pumpkins very successfully. In 1898 experiments were carried on at the Oregon station to determine the value of pumpkins as a part ration for hogs, with the following results: They were fed from Oct. 10 to Dec. 25. The pumpkins were cooked and shorts were added to make the food palatable. The hogs gained 499 pounds, and consumed 7523 pounds of pumpkins and 924 pounds of shorts. Placing the pumpkins at \$2.20 per ton, and the shorts at \$12 per ton, the total cost would be \$14.94. This makes the cost of gain in 100 pounds of live weight \$2. This is the cheapest pork produced from any combination of food materials tested at the Oregon station. The pumpkins were valued at the estimated cost of production. The pork produced by this feed was pronounced first-class for bacon purposes. The hogs were healthy and were never off their feed throughout the entire feeding period.

**HOGS FREE FROM DISEASE.**—Hogs in the Northwest are generally free from disease. Hog cholera is practically unknown in Oregon, Washington and Idaho. No well defined cases have, so far as we are aware, developed within this region, although cases have been reported where hogs were imported from cholera infected districts in the Eastern States. Our methods of feeding, together with a greater variety of food material, is conducive to the health of the animals. The comparatively small proportion of corn fed is an advantage to health. Corn, being a highly carbonaceous food, induces more animal heat, and should be mixed with some food rich in protein to give the best results, both as affecting the health of the animals and the quality of the product. Where wheat, oats, barley, peas, alfalfa and clover constitute the chief supply, there is little danger of disease.

**PROSPECT OF THE INDUSTRY.**—In conclusion it may be said that there is a broad field for the farmers of the Pacific Northwest to occupy in producing a superior article of bacon and other pork products. The climate and feed conditions are the very best that can be found for producing a grade of pork which can not be excelled in the world.

There is not a day in the year, over large areas in this section, when hogs can not have some form of green succulent food. Pastures of clover, grasses and annual plants can be provided that furnish a large amount of food which, supplemented with a small ration of grain, will produce a superior article of meat products. The foreign, as well as the domestic market, demands a better pork product, especially in the hams and bacon. With good blood in the herd as the first essential, and then a proper food supply, the results will be wholly satisfactory.

## THE FIELD.

### Poisoning Caterpillars on Field Crops.

We have here and there every year a touch of army worm or other leaf-eating insect on field vegetables. The remedy is the use of arsenical poisons, and formulae have been frequently published in our columns. Some, however, may not have the information now at hand, and we publish the results of experiments in protecting beets from army worms at the Colorado Experiment Station, as described by the station entomologist, C. P. Gillette:

Experiments tried last summer proved that the common poisons, Paris green, London purple, and white arsenic, will destroy the caterpillars if well distributed upon the beets. These poisons may be applied dry or in water. If the caterpillars appear upon the beets while the latter are small, I believe the best method of application is to mix one part by weight of Paris green or London purple with twenty parts of common flour, and then dust the mixture over the plants before sunrise in the morning. In this strength a light dusting will be sufficient. The early application is recommended, because then the leaves have a slight amount of moisture upon them, which helps to hold the flour and poison. Just after the leaves are moistened by a shower is also a good time to make the application.

**POISON POWDER.**—To apply the poison, make a small cheesecloth sack about 5 inches in diameter and 10 inches deep. Fill it with the mixture of poison and flour and walk along a row of plants shaking the sack over them. This can be done quite rapidly when one has learned how and is economical of poison, and does not require wheelbarrow or wagon to carry pump and tank.

**POISON SPRAY.**—When the plants become large, as in case of treatment for the second brood, it will probably be better to use a barrel or tank and spray pump. If a spray is used, apply either Paris green or London purple in the proportion of one pound to 100 gallons of water, and add two pounds of fresh lime for each pound of poison. The lime should be slaked and strained through a sack to take out lumps. Then use a nozzle that throws a fine spray, and do not continue the application in any place long enough so that the drops sprayed upon the leaves will run together and flow off, carrying the poison with them.

If white arsenic is used, prepare according to the following directions: Put two pounds of white arsenic and eight pounds of sal soda in a dish and boil for twenty minutes in two gallons of water, and keep as a concentrated solution. It is extremely poisonous and should be placed at once where there is no possibility that children or domestic animals can get it. Also, label it "Poison!" in large letters.

Then, in each forty gallons of water, first slake four pounds of lime and then add slowly one quart of the concentrated solution while the whole is being stirred. The mixture is then ready for application. The lime should be strained through a cloth to take out the lumps.

I am advising the use of these poisons somewhat stronger than is common, but the experience of last year makes it seem advisable to do so. Growers should keep the closest watch on their beets this year, in order not to let the caterpillars get the start of them.

### Cowpea Hay.

Some of our cultivators of moist land are getting a heavy summer crop of cowpeas and may like to make some hay of the vines. The Tennessee Experiment Station in a recent bulletin says: "Cowpeas are ready to make into hay when the lower leaves and pods show a yellowish tinge. They may be used as a soiling crop before this stage is reached. If the crop is allowed to stand longer, the leaves become brittle and the stems hard and fibrous. As a result, the latter are less digestible and not readily eaten, while the loss of leaves or pods would be particularly serious, as they are richest in protein."

"When the right stage is reached for hay making, we prefer to cut down a considerable area and allow the peas to wilt in the sun. The next step is to rake up and put in large cocks from 10 to 15 feet in diameter. The pea vines should now be left to heat and cure in these cocks. If cocked when they are rather green, it is generally necessary to partly open the cocks once or twice and let the surplus moisture evaporate. If proper care is observed, there will be little difficulty in fair weather in making a first-class quality of hay."

"There are some who claim that cowpea hay can be made in a simpler manner, namely, to cut the hay, allow it to partially wilt, and then draw it to the barn and store it in large bays. It is there left to heat and cure, the great mass having sufficient weight to exclude the air on the principle of silage. There is some danger, however, of fire-fang, and even of fire in the barn from spontaneous combustion, as has been shown in several well authenticated cases. The first method is preferred at this station. Cowpea is not more difficult to make than good clover hay where proper precautions are observed."



## Agricultural Review.

### ALAMEDA.

**DRYING SEASON OPENED.**—Niles Herald, June 29: The first apricots reached the Ellsworth drier Wednesday and the Co-operative to-day. This is a week earlier than the first shipment last year, which was on July 4, while this year it was June 25. In another week picking will be in full swing and the driers will have all they can do to keep up with the fruit offered. A number of growers have sold at prices ranging from \$20 to \$25 per ton, but it is not believed that many will do so.

**NOVEL SUIT.**—Alameda Argus, June 28: Suit was begun in the Superior Court in the name of the people by Tiley L. Ford, Attorney General, on the relation of Charles L. Champion against the Fruitvale Quarry Company and others to restrain them from establishing a quarry. It is contended that there are several chicken ranches within about 400 feet and the eggs will be added by the concussion which will be caused by the explosions. Champion claims that if such quarry is permitted "it will cause great injury to chickens on the ranches, to residents and all passers-by on the road, both man and beast, and to all growing things." The dust, it is claimed, will be "injurious to health and offensive to the senses."

### BUTTE.

**GRAIN FIRE.**—Chico Enterprise, June 28: A fire yesterday on the farm of Mrs. S. D. Whitten destroyed 100 acres of barley, a warehouse full of hay and a combined harvester. The loss will aggregate \$3500.

### COLUSA.

**HAY AND GRAIN DESTROYED.**—Colusa, June 30: This morning a fire started in the foothills, near Sites, and burned over an area of about twelve miles. The two quarries at Sites shut down so the men could fight the fire. Gangs also went out from Maxwell and Williams. It is reported that the fire destroyed four buildings near Sites. Hay and grain were burned on the Doolings, O'Keefe and Evans ranches. The fire was stopped within two feet of Manor's large grain field, near Williams. The loss at this time is unknown, but will be heavy.

**WHEAT CROP SHORT.**—Colusa Sun, June 30: From all over the valley comes the report that the grain yield will be fully one-fourth short of the estimate when the harvesters first began. The main portion of the wheat of the State is in the Sacramento valley, and that will not turn out half a crop. The groat, reliable portions of Butte county did not get a chance to plant, and nowhere was the full intended acreage put in, and then of what is put in there is not over half a good yield coming from the machines. Barley is not turning out well, but there is a large area planted and there will be enough for all demands.

### FRESNO.

**CO-OPERATION OF MELON GROWERS.**—Fresno Republican, June 28: A meeting of watermelon growers was held yesterday, when the terms of the contract were discussed. Each signer agrees to turn over his melons to the association for inspection. Regarding all melons which pass through their hands, the directors will insure to the buyers that they are of the best quality and to the sellers that they will be sold at a uniform price, which will be made as high as possible, and no fixed price will be lowered unless the impossibility of selling at that rate has been demonstrated. The association will sell no melons to any dealer who has bought from persons outside the association. If any member of the combine sells his whole patch he must sell to one who has become a member. After the terms of the contract had been agreed upon, signatures were called for, and, with one exception, all present appended their names. The number of acres pledged was 459, while the number required is only 500.

### LOS ANGELES.

**PRICE OF CANNED FRUIT.**—Los Angeles Times: Canned fruit prices in carload lots at the canneries have been made. The high cost of tin created the expectation that canned fruit would be 10 to 15 cents per dozen dearer than last year's prices, but the heavy crop of fruit has made the price so low, the canned article will rule at 10 to 15 cents less than last year. Apricots and pears will be 5 to 10 cents dearer. Only carload lot prices have been fixed. The jobbing prices will be set later on.

**APRICOT DRYING.**—Pomona Progress, June 28: The busiest part of the apricot drying season will not be until next week, but a thousand people are engaged at present in the drying yards. The crop will run smaller than last year's. Much of the fruit is not of extra good quality.

The skin crack is thought to have been caused by the late heavy rains followed by irrigation, thus forcing maturity. Apricots are ten days earlier than last year and the ripening is progressing rapidly. The Pomona Deciduous Fruit Association has 240 cutters at work. The company expects to handle 800 tons. At Loud & Gerling's drier, 100 cutters are busy. G. H. Waters & Co. have 200 people grading and cutting. This firm is canning 20,000 cans daily, and expects to handle 300 tons. C. A. Ludlow expects to double his force of 150, and is preparing to handle 500 tons. In addition to the above other firms expect to handle a total of 600 tons.

### MENDOCINO.

**WOOL SALE.**—Ukiah Dispatch-Democrat, June 29: The wool sale was a disappointment to growers this year. About half of the output is still held by them. Henry Hopper was the principal purchaser, buying over 600 bales, or about 152,000 pounds, at 16½¢ per pound. The growers expected 20 to 25¢ per pound.

### PLUMAS.

**DEEM SHEEP TAX TOO HIGH.**—Quincy Bulletin: It is estimated that at the present time there are about 70,000 sheep grazing in this county. Of this number the license on about 20,000 has been collected. The owners of about 35,000 have refused to pay any license at all and propose to resist the efforts of the county to collect the same.

### SAN BERNARDINO.

**DRYING OPERATIONS.**—Redlands Facts, June 27: Drying houses are in the midst of the apricot campaign, though not quite at the height of their operations. The fruit is of better size than was expected and the quality is about the same as last season. It is bringing \$15 to \$17 delivered, though some is reported to be bought as low as \$14, while others expect \$18 for extra quality. At the Brocton drier, A. Gregory has 160 employees. By the middle of next week the force will be increased by twenty, at which time thirty-five to forty tons of green fruit will be handled daily. At the Ontario Packing Co.'s drier there are 110 at work. It is expected that twenty-five tons a day will be cut during the height of the season. At the smaller driers there are about fifty men employed, making a total of 320 who find employment in the driers alone. Because of the long season during which the apricots were blooming, the campaign will last longer than usual, notwithstanding the fact that there will be no fruit of the late varieties and no peaches whatever to dry.

### SANTA CLARA.

**OUTLOOK FOR PRUNES.**—Pacific Tree and Vine: Our observations on prunes are not as favorable in unirrigated orchards as some weeks ago. The last week has shown that where there has been no irrigation the moisture has begun to fail in consequence of the heavy demands upon it by large trees and a thick setting of fruit on some lands, and the fruit shows signs of suffering. A gentleman told us that his orchard which gave a promise of 100 tons of prunes will probably drop back to fifty or sixty. There are several cases like this, and the fruit will not come up to full size. In some cases where the growth has not stopped, irrigation will be used at once and the growth kept up. Mr. E. M. Ehrhorn told us that, having occasion to dig a pit in a portion of the home orchard which had been well irrigated, moist earth was found to a depth of 18 or 20 feet. In orchards not irrigated there is a zone of dry earth about 4 to 4½ feet down, above which the moisture is falling. In some cases superior cultivation is retaining the soil moisture, which struck deeper, also in consequence of the cultivation before the later rains of spring. Taken altogether, the rosy outlook for an immense crop of prunes is clouded a little.

### SOLANO.

**SHORT WHEAT CROP.**—Dixon Tribune, June 29: The wheat crop in the vicinity of Fremont will not average half a crop. As the harvest progresses it becomes evident that the shortage is great. Where a ton to the acre was expected, there is but a yield of 1000 pounds. Various reasons are set forth, but the generally accepted opinion is that the warm winter, with a surfeit of moisture, forced growth unnaturally, thus causing a decay and rust, which sapped the vitality of the plant during the maturing season.

**HARVESTER BRAKE.**—M. G. Morgan has invented an emergency brake for harvesters. It consists of a pair of shoes which are suspended just in front of the draft wheels. To each shoe is attached two strong chains, which are long enough to allow the shoes, when released, to reach a point directly under the wheels. When released the shoes fall immediately in front of the wheels, the forward movement of the machine carrying the wheels well on to the shoe and forming what is known as "a

rough lock." The shoes are released from their suspended position by means of levers conveniently located, one within reach of the driver and the other on some part of the machine easily reached by the header attendant or other person engaged about the harvester. In the event of a runaway, one or both levers are worked and the shoes are allowed to fall beneath the wheels; the effect is easily realized.

### SUTTER.

**ORCHARD NOTES.**—Yuba City Farmer, June 29: The apricot crop is practically on the dry ground—that is, what little there was of it. The early plums and peaches are nearly gone and most of the orchardists are putting in time getting everything in readiness for the peach season, which will open about July 15.

### STANISLAUS.

**WHEAT FERTILIZING.**—Modesto Herald, June 28: It was stated recently that the acre of wheat fertilized with a sackful of nitrate of soda, spread broadcast in April last by James Thompson of Lanark Park, developed four grains to the mesh, while the remainder of the field developed but three, and that this particular acre of wheat, though winter-sown, took on the deeper green of summer-fallowed wheat. Now comes the proof of the harvesting, and that proof is that this particular acre yielded two sacks more grain than any other acre in the tract. The nitrate of soda was applied after the wheat had attained a height of 8 inches, and we had frequent and heavy showers thereafter that carried its elements into the soil. It is a red soil. The fertilizing experiment will be conducted on an extensive scale on the Thompson ranch the coming season. Investigation is to be made to determine the best method and time for applying the fertilizer, additional cost per acre and other data. Since the South Australian farmers have found fertilizing very profitable, there is reason to believe that our farmers may do so with corresponding advantage. The Australians drill in the fertilizer with the seed, obviously a method from which the greatest benefits may be derived at a minimum of expenditure, obviating, too, the "burning" that would follow the use of much fertilizer where the rainfall is light—there as here.

### TEHAMA.

**WATER CLAIM FILED.**—Red Bluff Cause, June 30: A notice was filed yesterday by which A. W. Samson, W. H. Samson, J. E. Rutledge and L. B. Healey claim 3000 inches of the water of the South Fork of Battle creek. The place of diversion is in section 19, township 29 north, range 3 east. The water is to be used for irrigation and domestic purposes.

### TULARE.

**GRAIN CROP.**—Hanford Journal, June 6: The grain crop of Tulare county for this season is estimated at 60,000 tons. The late advance in the price of wheat is thus said to have benefited growers to the extent of \$120,000.

**SULTANAS SELLING HIGH.**—Tulare Register, June 29: Over in the Dinuha country Sultana grapes are being contracted by the wineries at \$15.50 per ton. This is considered better for the grower than making the grapes into raisins, and will probably make the way a little better for those who do make raisins.

### YOLO.

**ALMOND GROWERS MEET.**—Woodland Mail, June 26: The Davisville Almond Growers' Association met yesterday. A representative of J. K. Armsby Co. presented figures to show a State crop of 300 carloads. The growers also made an estimate and set the amount at 215 cars. A committee to confer with the Brentwood growers with the object of establishing a uniform price was appointed. The association has invited bids from dealers for the entire crop, which bids will be opened at Davisville on July 14th. The successful bidder will be required to furnish an approved bond in the sum of \$20,000 for the faithful compliance with the terms of the contract.

**COYOTES WORTH MONEY.**—Woodland Mail: D. E. and G. A. Wolgamott recently captured eight young coyotes at the sink of Cache creek while hunting. Then ran across a den in the ground and succeeded in catching them all alive. It is a lucky find, as coyotes are valuable. Messrs. Wolgamott expect to get a bounty of \$55 each, making a total of \$440. C. Nelson pays \$25 per head. T. F. Laugenour \$15, D. A. McGriff \$5, Sam Haines \$5, and the county bounty is \$5.

**FRICTION FIRES GRAIN FIELD.**—Woodland, July 2: A grainfield fire in western Yolo last Saturday evening destroyed 160 acres of grain that belonged to G. W. Scott, and a harvester, the property of W. J. Cannedy. Some of the mules of the harvester team took fright and tried to run away. The driver ap-

plied the brake, and the friction of the big wheel produced sparks which started the fire.

### ARIZONA.

**CROP REPORTS.**—Weather Bulletin, June 26: All previous records of aridity for the vicinity of Phoenix have been exceeded during the past week. The temperature has been above normal, and hot, desiccating winds were recorded by a number of correspondents. No rainfall has been reported from any locality. Vegetation is being taxed to the utmost limit for survival during this unprecedented period of unfavorable weather conditions. With an insufficient and diminishing water supply for irrigation, an atmosphere practically devoid of moisture, and the subterranean flow of water failing, or sinking to lower levels, the outlook at the present time is becoming critical. The rivers are running lower than ever before recorded, and springs and wells are failing in many localities. Plant growth is practically arrested, and fruit trees are suffering. It is estimated that citrus fruits will not yield more than half a crop, and in some orchards the fruit is still dropping. Grain and hay harvesting is in active progress, and some threshing has been done in the upper Gila valley. Corn is growing under adverse conditions in this locality, and a total failure of the crop will occur in places. The ranges in all sections are reported to be in bad condition, and losses of stock have occurred on account of deficient feed and water.

### OREGON.

**SHORT HONEY CROP.**—Ashland Tidings: The honey crop will be short this year, and already prices are much higher than a year ago. There is a dearth of bees on the ranges this year, although there are as many, if not more, flowers and blooms than is usual. It is thought that less than one-fourth of the usual crop will be gathered.

### WASHINGTON.

**WHEAT CROP.**—Spokane, July 1: E. Carden of Seattle, manager of the J. Q. Adams Company system of warehouses along the Great Northern, estimates Washington's wheat crop, barring bad luck, at 30,000,000 bushels. Samuel A. Glasgow of the Centennial mills of Spokane and Seattle confirms this estimate. He predicts that if the present conditions continue the State's yield will be double that of last year, when it was 16,000,000 bushels.

**DAIRIES DISPLACING HOP YARDS.**—Seattle Post-Intelligencer, June 28: Reports received by hop buyers from western Washington hop growing districts indicate that the crop of 1900 will be much smaller than that of 1899, and that many yards in the valleys between Seattle and Tacoma will be turned to other uses. In many cases growers have decided to use a portion of their hop lands for dairy farming, and that for this reason the crop of 1900 will be several thousand bales short of that of last year. Vines are well advanced, strong and healthy, more so than for several years past. This would indicate a larger yield than usual, but the acreage will be much less than for some time past. Last year's crop was approximately 30,000 bales in Washington. The quality was choice, but the price was low. The result was that the farmers did not make any money. They got on an average 9 cents per pound. This is a profit of approximately one and a half cents per pound, or about \$20 per acre. This is a small return, considering the yield and prices of former years. My information is that the hop acreage in King and Pierce counties will not be over half what it was in 1899. I know personally of a number of large growers who have plowed up their hop yards and seeded them to grass, intending to use the land for dairy farming. Reports received by local hop men indicate that in the Chehalis valley the yield will not be as great as last year, owing to the decreased acreage. There is no activity in the hop market in this State, last year's crop being practically sold out. It is estimated by hop growers that there are not to exceed 500 bales of the 1899 crop on hand at the present time.

## Horse Owners! Use

GOMBAULT'S

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A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland O.





## THE HOME CIRCLE.

### Rienzi to the Romans.

Friends!  
I come not here to talk. Ye know too well  
The story of our thralldom. We are slaves!  
The bright sun rises to his course and  
lights  
A race of slaves! he sets, and his last beam  
Falls on a slave! Not such as, swept along  
By the full tide of power, the conqueror  
leads  
To crimson glory and undying fame,  
But base, ignoble slaves—slaves to a horde  
Of petty tyrants, feudal despots; lords  
Rich in some dozen paltry villages,  
Strong in some hundred spearmen, only  
great  
In that strange spell—a name! Each  
hour, dark fraud,  
Or open rapine, or protected murder,  
Cries out against them. But this very day  
An honest man, my neighbor—there he  
stands—  
Was struck—struck like a dog—by one  
who wore  
The badge of Ursini! because, forseoth,  
He tossed not high his ready cap in air,  
Nor lifted up his voice in servile shouts,  
At sight of that great ruffian! Be we  
men,  
And suffer such dishonor? Men, and  
wash not  
The stain away in blood! Such shames  
are common.  
I have known deeper wrongs. I, that  
speak to ye—  
I had a brother once, a gracious boy,  
Full of all gentleness, of calmest hope,  
Of sweet and quiet joy; there was the look  
Of Heaven upon his face which limners  
give  
To the beloved disciple. How I loved  
That gracious boy! younger by fifteen  
years,  
Brother at once and son! He left my side,  
A summer bloom on his fair cheeks, a  
smile  
Parting his innocent lips. In one short  
hour  
The pretty, harmless boy was slain! I saw  
The corse, the mangled corse, and then I  
cried  
For vengeance! Rouse ye, Romans!  
Rouse ye, slaves!  
Have ye brave sons? Look in the next  
fierce brawl  
To see them die! Have ye fair daughters?  
Look  
To see them live, torn from your arms,  
dismayed,  
Dishonored; and, if ye dare call for justice,  
Be answered by the lash! Yet this is  
Rome,  
That sat on her seven hills, and from her  
throne  
Of beauty ruled the world! Yet we are  
Romans!  
Why, in that older day, to be a Roman  
Was greater than a king! And once  
again—  
Hear me, ye walls, that echoed to the  
tread  
Of either Brutus—once again, I swear,  
The eternal city shall be free!

—Mary R. Mitford.

### "A Little Hoard of Maxims."

They were wise in their day and  
generation, were Aunt Lucy Favor-  
sham and her married sister Miranda  
Burr. They had all the feminine max-  
ims by heart, and repeated them often,  
being incurably loquacious.

"Make up your mind to this, Lil-  
ian," Mrs. Burr would say to her  
daughter. "It is as easy for a girl to  
love a rich man as a poor one, and a  
great deal more sensible. I've been  
poor, and I know what it means. You  
dwindle up like an acorn in the wet  
season. I tell your aunt, often, that  
you can't even be high-minded without  
a little money to manage it on. Really,  
I believe half the folks who go to hell  
get there because they were so poor  
they couldn't be good. Envy, hatred,  
and all uncharitableness, those are the  
things that come from poverty. Ro-  
mance doesn't last as long as a cab-  
bage moth without some money to keep  
it going. But with money it's possible  
to get along quite agreeably in the  
house with almost anybody."

Miranda Burr drew her smiles from  
the farm life which she endeavored to  
forget; her maxims, on the contrary,  
were a tribute to the comfort of a city  
establishment, in which she endeav-  
ored, with but indifferent success, to  
act the grand lady.

Aunt Lucy Favorsham was a trifle

more adroit in dealing with her niece  
than the girl's own mother was.

"Books and pictures and music and  
the society of cultured people—those  
things go with money," she said. "And  
liberty. That goes with money, too.  
It always seemed to me that a woman  
was no better than a chattel when she  
had to ask a grudging husband for  
every cent she got. It's the humili-  
ations and petty sacrifices which go  
with poverty which offend me. But no  
one can know the measure of those  
who have not had experience."

The girl to whom these remarks  
were directed looked somewhat wearily  
out of the window and saw a young  
man coming down the street. She  
flushed scarlet, then arose impulsively  
and went to meet him, catching up her  
hat and sunshade from the hall table  
as she passed.

"Dick," she said, as she ran down  
the steps to meet him, "let's walk to  
Jefferson square. I've been in all day.  
Don't you think the vacation is tire-  
some, Dick? I've been wishing and  
wishing to-day that I was back at  
school."

The young man looked at her ten-  
derly.

"If you were back at school," he  
said, "I should not have the pleasure  
of this walk."

But the girl did not look pleased at  
this obviously sincere compliment.

"They think about different things  
at school," she said. "It's better to  
think about history and geometry and  
—and that, than about—"

She hesitated, confused in the midst  
of her speech.

"I don't understand," he said.

"No, I suppose not! I couldn't ex-  
pect you to, Dick," with a swift  
change of expression, "how do you like  
this gown?"

"It's a pretty little gown, dear. I  
noticed it the minute I saw you. You  
never had it on before, did you?"

"No, I made it. Do you know why?  
I wanted to see how I would look if I  
were a poor man's wife and made my  
own things. You say it is pretty,  
Dick, but that's because you didn't  
know. It is hideous. There isn't a  
seam in it that's right. Everything is  
the matter with it, and I am never go-  
ing to wear it again."

Dick Underwood looked perplexed.

"I dare say we'll be able to manage  
dressmakers," he said, somewhat  
doubtful. "But how strange you are  
to-day, dear—angry, and not like your-  
self."

"I'm not going to marry you Dick.  
I've made up my mind. I know you  
thought my answer was going to be  
different, but I have decided that it is  
to be no. We would wear on each  
other horribly, I know we would, if we  
were to be worried about—about bills  
and all that. I can see just how mis-  
erable it would be. It's everything  
which isn't beautiful. It's hateful and  
common and degrading. I've been  
thinking it all over—"

The young man's eyes were blazing.  
"No you haven't," he denied,  
"you've been listening! It's your  
mother and your aunt who have been  
instructing you. And they have suc-  
ceeded in making you think that love  
is not beautiful, have they? It seems  
impossible, but they've done it, and—  
and if you don't mind, Lilian, I'll leave  
you here. You won't mind walking  
home alone." He lifted his hat and  
turned away from her, tense and an-  
gry.

"Dick! Dick!" The cry was in-  
voluntary and freighted with keen  
alarm and pain. The young man went  
on down the street, not looking back.  
Lilian Burr walked home and faced her  
mother and aunt, white-faced and with  
set lips.

"I've followed your advice," she  
said, accusingly. "I've turned my  
back on poverty."

She went upstairs to her own room,  
and the women heard her turning the  
key in her door.

"Poor child," said her mother with  
a thrill of compassion. It's a little  
hard for her now."

"Yes," admitted Aunt Lucy. But  
neither of them felt remorseful. They  
looked on themselves in the light of  
surgeons.

That night the girl folded up the  
little blue frock she had worn and laid  
it away in a box. With it she laid a  
bunch of letters.

"What a spectacle I am making of  
myself," she soliloquized contemptu-  
ously. "Still," she reflected, "I can  
hardly be said to be a spectacle when  
there are none by to see. It's my own  
foolishness, and no one will ever know  
anything about it."

Two weeks later Erard Allen said to  
her:

"I love you dearly, Lilian. I have  
asked your mother's permission to  
speak to you, and she is quite willing."

"Oh, yes," said the girl with some  
bitterness. "I know she is entirely  
willing."

"And are you? Are you willing to  
become my wife?"

"Why not?" responded the girl,  
sharply, and the lover had to make the  
most he could of that ungracious ac-  
ceptance.

Mrs. Erard Allen came to be known  
as a brilliant and successful woman.  
Her beauty, her wealth, her gracious-  
ness of manner, her hearty friendliness  
and her intelligence won a distin-  
guished place for her.

"What a different woman Lilian is  
from what she might have been if she  
had married that poor Dick Under-  
wood," Aunt Lucy Favorsham re-  
marked at frequent intervals, and Lil-  
ian's mother acquiesced. They had,  
however, some complaint to make, in  
spite of their freely spoken admiration.

"Lilian never comes to sit with us,"  
they said to one another. "If we go  
to her she is always surrounded by  
others. We are invited there to dinner  
or to tea. She never appoints a time  
to be alone with us. Do you remem-  
ber what pride she used to take in  
making little gifts for us? Now she  
buys things ready-made and sends  
them up. It sometimes seems as if she  
had forgotten us, doesn't it?"

The woman they spoke of knew many  
mental vicissitudes, but she confided  
them to none. She had her tempta-  
tions—for she was beautiful, and men  
guessed that she did not love her hus-  
band—but she conquered them. She  
became a student and knew the depths  
of intellectual joy. She bore and lost  
two children and sounded sorrow. And  
at last her husband died and left her a  
widow.

"Well there's one comfort," com-  
mented her mother; "she's got enough  
to keep her in perfect comfort to the  
last of her days."

While she was congratulating her-  
self in this fashion her daughter was  
making over to others the fortune  
which had been left her. A part of it  
went to an old aunt of her husband's;  
more went to certain large families re-  
motely connected by marriage with  
herself. Some went for a ereche, some  
for a free kindergarten. Then, clad in  
an ill-fitting blue frock, old-fashioned  
and frowsy, she presented herself one  
day at the door of a certain poor man.

"Dick," she said, "I have been a  
widow for two years, and I have waited  
for you to come to me but you did not."

"Lilian! I have resisted the tempta-  
tion twenty times each day. I am al-  
most as poor as I ever was."

"I've come in the little blue dress I  
made, Dick. It'll do nicely for a wed-  
ding dress, if—if you think—if you  
think a wedding dress is needed."

He was incredulous.

"It is a fantastic dream," he said.  
"It cannot be true that, after the  
mockery of endless dreams which faded  
as I grasped them, you are here in the  
flesh."

She threw her off hat and clasped  
her hands upon the table before her.

"Look at me, Dick," she com-  
manded. "See how my eyes say: 'I  
love you.' They look with perfect  
frankness and naturalness for the first  
time in many, many years. For the  
first time the tones of my voice seem  
to ring true to my ears. For the first  
time I feel honest with myself. This  
is me—this woman who says 'I love  
you, Dick.' Of course, if you like, you  
can send me away. But I'm so poor  
now, and—"

"It must be a dream," he murmured.  
But there is no harm in embracing a  
dream, so it be a kindly one, and he

embraced this dream tenderly, with  
many broken words, with tears which  
would not fall, with all the starved  
heart's unutterable hunger.—Chicago  
Tribune.

### The Evolution of Our Flag.

It is in and through symbols that  
man, consciously or unconsciously, lives,  
moves, and has his being. Carlyle says:  
"Those ages are accounted the noblest  
which can best recognize symbolical  
worth and prize it at the highest." Symbols and colors, enabling nations to  
distinguish themselves from each other,  
have from remote periods exercised a  
powerful influence upon mankind. It is  
a fact, well established by both sacred  
and profane history, that a standard or  
ensign was borne in the armies of all  
nations from the most distant era.

There were various flags with differ-  
ent designs combined with the English  
flag used up to the time of the grand  
union flag-raising at Cambridge, Mas-  
sachusetts, January 2, 1776, when they  
unfurled the first thirteen stripes, em-  
blemation of the union of the thirteen  
colonies against the oppressive acts of  
Great Britain. The last symbol of  
royalty abandoned was the English flag.  
General Washington designed a new  
flag in May, 1776, with the thirteen  
stripes, seven of red and six of white,  
and in the upper corner a blue field con-  
taining thirteen stars. It was made by  
Mrs. Betsy Ross, of Philadelphia, but  
was not adopted by Congress until the  
14th of June, 1777, when our flag was  
flung as a new constellation to the  
world.

The stripes have never increased in  
number, but the stars, each represent-  
ing a State, have increased to the num-  
ber of forty-five. Each of the States  
of our Union has a flag of its own, em-  
blazoned with the arms of the State;  
this flag is carried by the militia or in  
parades side by side with the national  
standard. After the Mexican war the  
flag was a relic of the past until the 12th  
of April, 1861, when the shot on Fort  
Sumter transformed the nation. The  
flag was then no longer an historic em-  
blem; it was a living principle, worthy  
of the country's sacrifice. The dear  
old flag was not divided or dishonored,  
but preserved at a great cost.

Thus through a process of evolution,  
our flag has come down to us, not as a  
relic, but as part of our inheritance. All  
from the least to the greatest can with-  
out boasting, but still with national  
pride, exclaim, "Our Flag"—"Loug  
may it wave o'er the land of the free  
and the home of the brave!"—Self Cul-  
ture Magazine.

### Why So Many Fail.

Many young men fail to achieve suc-  
cess because they lack the power or  
inclination to do hard work. The head  
of one of our large department stores,  
in addressing a body of teachers, said:  
"No man in the practical world of to-  
day can hope to get on if he shirks his  
work. I ask you to use all your power  
and influence to instill in the minds of  
those you teach the truth that a man  
owes work to the world, while the  
world does not owe him anything." An  
expert accountant of many years' prac-  
tice said: "The best man I ever had in  
my employ was a plodder." Many young  
men fail to render valuable service  
through lack of ability to do accurate,  
systematic work. The business com-  
munity demands well-trained minds,  
capable of grasping details and carry-  
ing out instructions in a correct and  
orderly manner. The young man who  
possesses this faculty is a rarity, and  
never need be without profitable em-  
ployment.

Above all else, the young man who  
would succeed must be honest and tem-  
perate. He must be what he would  
appear. There is a premium upon  
those who possess sterling manhood,  
fixity of purpose, and a determination  
to overcome obstacles. Life's highest  
prizes are within their grasp.—Success.

PENELOPE: Well, after all, I believe  
the less one knows the happier one is.

GENEVIEVE: That's a comfortable  
philosophy. You must be very happy.



## Hints for Summer.

The foundation of a good complexion is cleanliness, and since frequent bathing is necessary for perfect health, it is also necessary for good looks.

The face should not be washed in very hot water, as that contracts the pores, but warm water should be used. If the pores have been subjected to an unusual amount of dust or dirt, the best plan is to wash the face gently at night with a good toilet soap, adding a little borax to cleanse and soften the water, then rub in cold cream.

It is an excellent plan upon returning from an outdoor walk or ride in summer to bathe the face to remove the dust that has gathered upon it.

Any one who is troubled with blackheads can cure them by careful attention to their diet. Avoid fatty foods, pastry and an excess of sweets. The daily bath, plenty of exercise and an active digestion will also assist in getting rid of unsightly blackheads.

Wash the face at night with warm water and Castile soap, using a complexion brush. After rinsing apply cold cream.

Many who have bad complexions and are troubled with pimples should bathe the face every night with warm water to which a little boracic acid has been added. This is very healing and 5 cents' worth will last some time.

It is necessary for the busy housewife to wash her hands and face frequently, and to protect them she should keep a box of powdered borax in some convenient place and add a little to the water each time. It keeps the skin smooth and white.

## Leather Cozy Corners.

Leather cozy corners are cozy, comfortable and artistic; moreover, they are the newest thing in the decorative line. The leather is buckskin, of the softest finish, and decorated with pyrography. If you are an expert at this work, you may get up an elaborate effect at comparatively little cost, but if you have to pay for the decoration as well as the material it is an expensive luxury.

To make a complete "corner," the couch should be covered with the leather, having a conventional border, and finished on the bottom with slashed leather to form a deep fringe. The wall on two sides should be covered to a depth of from 2 to 4 feet, according to taste, with the leather, stamped in some decorative style, a good idea being to represent scenes from Shakespeare or from some other literary source. The couch pillows are covered with leather, stamped with scenes to match, or with monogram, coat of arms, floral or conventional design. The natural color of the leather is preferred for all of these effects, but may be varied by a border in olive, maroon or other contrasting shade. The pillows are finished on the edge by a lacing of the two sides together by a leather strip. No other material is to be introduced, on pain of spoiling the artistic idea.

## Preparing for Fame.

We are apt to lose sight of the fact, too, that for years these men went into training, so to speak, for the success that was eventually to be theirs. For years Grant and Von Moltke, Farragut and Dewey were comparatively obscure. But they learned patience when hope was long deferred. During a lifetime, as one may say, they were growing toward the final triumph that was in store. Thus they learned the lesson of persistency. They never quailed and never despaired. All unknown to themselves, they were preparing for the great future which awaited them. Thus, when the hour and the opportunity came, they were ready and "walked up to fame as to a friend."—Success.

"MAKING any money these days?" asked Hicks of the mill owner. "Hardly any," said the other. "We are beginning to realize the truth of the old saying that it takes ten mills to make a cent."

## DOMESTIC ECONOMY.

## Omelette and Its Possibilities.

In the average American kitchen where the mistress glories in "plain cooking" the omelette and its possibilities are regarded with the awe due a great undertaking, and if anything in the omelette line is attempted it is the "plain" arrangement that even the most ordinary French cook would test with an inquiring finger and a quizzical: "What ees eet?"

An omelette, in fact, is most easy and simple of achievement, and its variety is infinite.

Well cooked, it is a dish for breakfast or luncheon that will make any man and most women feel that life is worth living.

One of the important requirements for making omelettes is a deep frying pan with a perfectly smooth surface, and it is well to keep one such pan solely for the purpose of cooking omelettes and French pancakes. No patent egg-beater nor persistent beating is necessary in producing the omelette. A fork, a soup plate, fresh eggs, a dash of milk or cream and a hot, smooth pan with sweet butter melting in it are the necessities for the production of the plain omelette.

A well-known United States Senator who is a gourmet and prides himself on being a culinary artist is famous in Washington for his omelettes, and his rule for making them is twelve beats with a silver fork for each egg—thus, when he makes a five-egg omelette he punctiliously applies sixty strokes in mixing it.

An omelette should not be seasoned before cooking, as that will make it watery; nor should the whites and yolks be separated. A tablespoonful of milk—cream preferably—should be stirred in for a four or five-egg omelette, and the mixture poured into a hot pan in which a generous tablespoonful of good butter has been melted, but not browned. Then it should be gently shaken and rolled from side to side until it is cooked to a soft jelly. A hot platter should be ready and as soon as it is cooked it should be half slipped off on the platter and with a dextrous flip of the pan the other half folded over and served at once with some sprigs of parsley or cress as garnish.

So much for the plain omelette, and the foundation for nearly all other omelettes.

Variety may be given in numberless ways—with tomatoes, mushrooms, peas, bacon, asparagus tips, chicken livers, ham, smoked beef, sardines and even cheese, not to mention the omelette soufflé.

One of the most savory omelettes is that made with tomatoes—the Spanish.

For a five-egg omelette—enough for three or four persons—have ready two slices of breakfast bacon, one onion, one green or red pepper, four large ripe tomatoes. Cut the bacon in dice and drop in a hot pan, add the onion, finely minced, then the tomatoes and pepper; season with salt and cayenne or Hungarian pepper; cook slowly for half an hour. Prepare the omelette as for plain, and when ready to serve cover one-half with the tomato mixture, fold and pour the balance of the mixture around it.

Omelette with peas is plain omelette with green peas added in the same way. The peas should be young and sweet, cooked for twenty minutes in boiling water with salt, a pinch of sugar and another of baking soda, drained thoroughly and a bit of butter melted in them.

Asparagus tips make a delicate omelette, added after being cooked till tender, drained and melted butter poured over them.

Button mushrooms are the kind to use with omelette. Peel them, add them to sweet butter, melting in a saucepan, stir in flour to thicken slightly, a little water or soup stock, pepper and salt, and add to plain omelette. Browned flour is always preferable for mushrooms.

Smoked or boiled ham, minced, tossed

in hot butter and folded into the omelette makes a quick and appetizing dish.

## Olive Oil for Cooking.

The use of olive oil for cooking has a great future. There is no oil so healthful, and wonderful pulmonary cures have been worked by its free use in this way. When one becomes accustomed to the taste, one prefers it to all other fats.

Biscuits made with three tablespoonfuls of oil to one quart of flour, instead of butter or lard, are delicious. Toast nicely browned, sprinkled with salt and olive oil poured over it, is a delicacy that one grows very fond of.

Mashed potatoes, seasoned as usual with salt and pepper, and a few tablespoonfuls of oil, instead of butter, have a wonderfully delicate taste.

Cook omelets in olive oil if you want something fine. Our way of cooking steak is: First, lay the steak in equal quantities of olive oil and vinegar. This is to make it rich and tender. Have the frying pan hot, with two tablespoonfuls of oil in it. Put the steak in it and fry quickly. When well cooked pour over the steak a little hot water, covering quickly with a lid to keep in the steam; set on back of stove and let simmer for five minutes. Thicken the gravy and dish hot.

Olive oil may be used in numberless salads to great advantage. Lobster salad garnished with crisp, green lettuce leaves and dressing with olive oil is delicious.

The tender leaves of the wild, green mustard, chopped fine, a little sugar, salt and pepper and olive oil added, makes a most wholesome and palatable dish. We have never seen any one who has tasted it but learns to like it if he or she does not at first.

Besides being wholesome, olive oil is a great beautifier. It tends to fatten, however, and softens the skin as if by magic.

## To Remove Grease From Paper.

To remove a grease spot from paper heat an iron and hold it as near as possible to the stain without discoloring the paper, when the grease or wax will disappear. Upon any traces that are left, put powdered calcined magnesias for a time. Bone, well calcined and powdered, is an excellent absorbent of grease; also plaster of Paris. For extracting spots of a resinous nature, use cologne, turpentine or benzine. A beautifully bound book, and quite new, had oil from a lamp spilled over it. The culprit called for quicklime, but there was none to be had, so he got some bones, which he quickly calcined and pulverized and applied. The next morning there was no trace of oil, but only an odor, which soon vanished.

## When Peeling Onions.

The pungent odor of onions is due to a sulphurous oil, which volatilizes rapidly when the tissue of the vegetable is broken in any manner, and especially affects the delicate membranes surrounding the eyes. This effect however, can be easily avoided by sticking a small pared potato on the end of the knife with which the cutting is done. A chemical affinity, which cannot be readily explained, but which is none the less satisfactory in its workings, attracts the fumes, and their presence is not manifested to the operator till the potato has reached a certain degree of saturation, when it can be readily replaced by another.

## Chocolate Dates.

Chocolate dates are the best of the home-made sweets when made of first-class materials, and in making candy, even more than in other cooking, this is essential, says the American Queen. Take one pound of dates, wipe them off with a damp cloth, slit them lengthwise just enough to extract the kernel without bruising the fruit. Then prepare the chocolate. One-quarter of a pound will be sufficient, add an equal weight of powdered sugar, two spoonfuls of boiling water, and mix over

the fire in a small earthenware or porcelain-lined saucepan until quite smooth, but do not allow it to boil. Just before removing the saucepan from the fire have ready another panful of boiling water, and into this set the small saucepan just to keep the chocolate fluid until the dates are filled. Take up with a spoon a little of the chocolate mixture, press open the date and pour in the chocolate; then press the sides of the date together, allowing the chocolate to show just a brown ridge in the middle of the date; when all are finished place the dates on a plate to harden. They should not be packed until the following day.

## Domestic Hints.

**STEAK PUDDING.**—Shred fine one pound of suet, mix into it a quart of flour, a little salt and enough water to mix as stiff as pie crust, and roll out half an inch thick. Lay pieces of beef or mutton steak with oysters and a minced onion on the paste, roll up in a cloth and boil till done. Make a thickened gravy of the liquor and pour over it after removing from the cloth.

**CUSTARD BALLS FOR CLEAR SOUP.**—Very few cooks understand the making of these balls, which should be delicate and light, with a distinct flavor of beef. To make them use the yolks of two eggs and the white of one egg. Stir into the well-beaten yellow a wine-glassful of cold, strong, clear beef tea, season with white pepper and salt and lastly stir in the stiffened white. If the soup is boiling when removed from the fire these custards should cook sufficiently without returning to the fire. Drop from a teaspoon on top of the hot broth, cover for a moment or two, and the result should be flaky and delicious.

**CORN PUDDING.**—Choose a good brand of canned corn, drain and chop fine with a sharp chopping knife (this is important), add a cup of milk, a tablespoonful of melted butter, quarter of a teaspoonful of salt, two well-beaten eggs and the juice. Mix well and bake in a moderate oven with the dish in a pan of cold water. Brown at the last on the top shelf of the oven. For pudding, add half a cup of sugar, but no flavoring, as that would destroy the sweet taste of the corn. Forty minutes should cook this; at the end of twenty test with a straw or silver knife. If "set," brown at once. Serve hot as vegetable; the reverse as pudding. The latter makes a wholesome and popular dish for children if the corn is worked through a coarse sieve, the hull excepted, and care taken not to overbake. The little folk are usually very fond of corn in any shape. It is often denied them when they would be the better if allowed to eat it, if the simple precaution is taken of straining out the outer husk.

## Hints to Housekeepers.

A small sponge saturated with oil of lavender and hung near the bed, or a handkerchief moistened and laid near an invalid's couch will be found an efficient aid in driving away intrusive flies.

The ordinary way of mixing mustard with water, tempering it with a little flour for a plaster is abominable. No water should be used, but mix the mustard with the white of an egg and the result will be a plaster which will draw perfectly, but will not produce a blister.

Onions are one of the finest nerve tonics we have, and if spring onions are chopped and spread between slices of bread and butter they form a sandwich that if eaten at supper time will do a great deal toward ensuring a good night's sleep. Plenty of onions should be found in a spring salad.

Children often get grass stains on their clothing. To remove these, moisten with alcohol, or rub moistened cream of tartar on them. Scorch can be taken out of clothes by dipping in soap solution and bleaching in the sun. To make the soap solution, shave the cake of soap into a dish and pour in sufficient boiling water to dissolve it so that it will be thick like jelly.



## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, July 3, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	June.	July.
Wednesday.....	82 1/2 @	81 1/2 @ 84 1/4
Thursday.....	79 1/4 @	83 1/2 @ 79 1/4
Friday.....	81 1/4 @	79 1/2 @ 81 1/4
Saturday.....	80 1/4 @	81 1/2 @ 80
Monday.....	— @	79 1/2 @ 77
Tuesday.....	— @	80 1/2 @ 77 1/2

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	July.	Sept.
Wednesday.....	6s 5 d	6s 6 3/4 d
Thursday.....	6s 4 d	6s 5 1/2 d
Friday.....	6s 3 1/2 d	6s 5 1/4 d
Saturday.....	6s 3 1/2 d	6s 5 1/4 d
Monday.....	6s 2 1/2 d	6s 3 1/2 d
Tuesday.....	2s 2 1/2 d	6s 3 1/4 d

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec., 1900.	May, 1901.
Thursday.....	1 14 @ 1 13 1/4	— @ —
Friday.....	1 13 1/2 @ 1 17 1/2	— @ —
Saturday.....	1 15 @ 1 15 1/2	— @ —
Monday.....	1 14 @ 1 12 1/2	— @ —
Tuesday.....	1 14 @ 1 14 1/2	— @ —
Wednesday.....	— @ —	— @ —

## WHEAT.

Although the crop conditions, which had the preceding week caused such a sharp advance in speculative values, gave no evidence of material improvement, the market for futures broke badly, receding to almost as low levels as were current before the short-lived boom started. While spot wheat has not dropped back to previous low prices, there has been so little done in actual wheat in this corner that values have not been very clearly defined. There was no selling pressure of consequence, however, and it was quite evident that to purchase freely the payment of materially better figures than had been ruling would have been necessary. Ships continue scarce and ocean freights remain high, operating against the development of firmness in wheat. Any changes in freights later on are more apt to favor wheat than the reverse. The action of the speculative market is most likely attributable to manipulation of the inside clique who are natural bears, although assuming to be bulls, and who push prices up sharply while outsiders are buying, so that they can be more readily crowded down when orders cease coming in.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, \$1.12 1/2 @ 1.15 1/2.  
May, 1901, delivery, \$— @ —.

Tuesday, at regular noon session of Call Board, December, 1900, wheat sold at \$1.14 1/2 @ 1.14 1/2 May, 1901, — @ —.

California Milling..... \$1 10 @ 1 15  
Cal. No. 1 shipping, alongside..... 1 02 1/2 @ 1 07 1/2  
Oregon Valley..... 1 02 1/2 @ 1 07 1/2  
Washington Blue Stem..... 1 07 1/2 @ 1 12 1/2  
Washington Club..... 1 02 1/2 @ 1 07 1/2  
Off qualities wheat..... 97 1/2 @ 1 02 1/2

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-99.	1899-1900.
Liv. quotations.....	6s3d @ 6s4 1/2 d	6s5 1/2 d @ 6s6 d
Freight rates.....	30 @ 32 1/2 s	40 @ — s
Local market.....	\$1 07 1/2 @ 1 10	\$1 05 @ 1 07 1/2

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

During the past ten cereal years wheat exports were:

	Centals.	Value.
Season 1899-1900.....	6,500,875	\$6,666,874
1898-99.....	2,286,760	2,758,994
1897-98.....	10,112,641	15,261,951
1896-97.....	10,101,592	13,024,688
1895-96.....	10,293,957	10,629,629
1894-95.....	9,605,296	8,607,135
1893-94.....	8,966,268	9,449,612
1892-93.....	10,553,619	13,825,632
1891-92.....	13,092,364	22,089,728
1890-91.....	13,828,701	20,009,213

Of the 7,157,545 centals wheat received the past season, 194,323 centals were from Oregon and Washington, against 987,493 centals in previous season. Total receipts previous season were 3,211,440 centals. Included in the total receipts of flour—1,385,579 barrels—there were received from Oregon and Washington 435,972 barrels, against 411,583 barrels in previous season. Total receipts of flour previous season were 1,427,095 barrels. Total shipments of wheat and its equivalent in flour from this State for past year, aggregate 489,618 short tons, with a valuation of \$10,781,239, against 256,271 tons, valued at \$5,734,205,

the previous cereal year. Vessels to the number of 127 were dispatched with wheat constituting the entire or main cargo.

## LOCAL STOCKS OF GRAIN.

Stocks of grain in Call Board warehouses on June 1st and July 1st:

Tons—	June 1st.	July 1st.
Wheat.....	139,933	*126,125
Barley.....	40,768	†36,283
Oats.....	4,295	2,916
Corn.....	192	385

\*Including 85,004 tons at Port Costa, 40,761 tons at Stockton.

†Including 17,696 tons at Port Costa, 9706 tons at Stockton.

Stocks of wheat in Call Board warehouses on 1st inst. show a decrease of 13,408 tons for the month of June. A year ago there were 66,918 tons wheat in Call Board warehouses.

## FLOUR.

The recent advance in quotable rates for flour, as was to have been expected, has caused a very decided lull in the flour trade. Heaviest buyers were enabled, through an old-time trick of brokers, to stock up at figures current prior to the advance. That there will be much activity at the new rates in the near future is not probable.

Superfine, lower grades.....	\$2 25 @ 2 50
Superfine, good to choice.....	2 60 @ 2 80
Country grades, extras.....	3 15 @ 3 40
Choice and extra choice.....	3 40 @ 3 65
Fancy brands, jobbing.....	3 60 @ 3 75
Oregon, Bakers' extra.....	2 90 @ 3 25
Washington, Bakers' extra.....	2 90 @ 3 40

## BARLEY.

The market for this cereal has ruled very quiet the current week, and while no appreciable changes in current rates were warranted, at least so far as the views of holders were concerned, the market was not firm at the figures prevailing. A full cargo of old crop barley, consisting of 65,511 centals, valued at \$59,000, was dispatched the past week to Europe. A good export demand for now barley may be soon experienced, and would improve the condition of the market materially.

Feed, No. 1 to choice.....	70 @ 72 1/2
Feed, fair to good.....	65 @ 67 1/2
Brewing, No. 1 to choice.....	80 @ 85
Chevalier, No. 1 to choice.....	— @ —
Chevalier, No. 2.....	— @ —

## OATS.

No great changes have been developed in the oat market since last review. Demand has been rather slow, with supplies fairly liberal of medium and ordinary grades. Choice oats are scarce, nor could many be placed at the figures now current on this description. Most of the new now coming forward are California Reds of rather ordinary quality.

White Oats, fancy feed.....	1 23 1/4 @ 1 25
White, good to choice.....	1 12 1/4 @ 1 20
White, poor to fair.....	1 05 @ 1 10
Gray, common to choice.....	1 02 1/4 @ 1 12 1/2
Milling.....	1 15 @ 1 25
Surprise, good to choice.....	1 20 @ 1 30
Black Russian.....	95 @ 1 07 1/2
Red.....	95 @ 1 17 1/2

## CORN.

Business doing in this cereal is not of large volume, but is at generally unchanged rates. Supplies are not of heavy proportions and are principally of Large Yellow and White, the latter being mostly domestic product and the former Eastern. The imported in stock is mainly in the hands of millers and jobbers and is not being crowded to sale.

Large White, good to choice.....	1 12 1/4 @ 1 15
Large Yellow.....	1 15 @ 1 17 1/2
Small Yellow.....	1 40 @ 1 50
Eastern, in bulk (carload lots).....	1 09 @ 1 11

## RYE.

There is some export demand for this cereal. The market is moderately firm at the rates quoted.

Good to choice, new.....	95 @ 97 1/2
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## BUCKWHEAT.

Values remain wholly nominal, in the absence of supplies, either California or Eastern.

Good to choice.....	2 00 @ 2 10
Silverskin.....	— @ —

## BEANS.

No brisk trade is in progress in beans and seldom is at this time of year. Present stocks are far from heavy and are mainly Large Whites, Bayos and Pinks. While market for those varieties is not firm, values are being fairly well sustained at the prevailing range. New crop Horse Beans have been coming forward lately in moderate quantity, meeting with fair custom at the rates quoted.

Pea, fair to good, 100 lbs.....	3 35 @ 3 50
Small White, good to choice.....	3 30 @ 3 40
Lady Washington.....	2 90 @ 3 05
Butter, small.....	— @ —
Butter, large.....	— @ —
Pinks.....	2 70 @ 2 90
Bayos, good to choice.....	2 85 @ 3 00
Reds.....	3 25 @ 3 75
Red Kidneys.....	— @ —
Limas, good to choice.....	5 25 @ 5 35

Black-eye Beans.....	3 25 @ 3 75
Horse Beans.....	— @ —
Garbanzos, large.....	2 50 @ 2 75
Garbanzos, small.....	2 00 @ 2 25

Advices by recent mail from New York give the following report of the bean market, prices quoted being per 60-lb bushel:

Neither home buyers nor exporters have shown much interest in domestic Marrow and the dullness of trade has caused a slightly weaker feeling; a few very choice have jobbed at \$2.10, and that price it still asked for that high grade of which the supply is relatively small, but average best marks can be bought easily at \$2.17 1/2, possibly at \$2.15. A few choice imported round Marrow have sold for export at \$1.70 @ 1.75 in bond, but the long variety are closing out slowly at \$1.50 @ 1.60. State Medium show further decline; buyers are now able to get choice quality at \$2.10, though some holders are trying to reach \$2.12 1/2. Pea have not changed materially, prices holding up because of very light supplies. Exporters have called for at least 600 bbls. of Red Kidney this week, but there was some pressure to sell and the price was shaded to \$2.10 @ 2.12 1/2 on choice stock; inferior grades not wanted. Only a few White Kidney here and values are sustained in consequence. Yellow Eye steady. Turtle Soup are offering lower and do not attract important demand from any source; round lots could probably be bought below our quotation. Lima unchanged; quotable at \$3.52 1/2 @ 3.55. Imported Medium and Pea have sold slowly and with the exception of strictly prime stock, which comprises a small part of present holdings, prices are lower and weak. The offerings of green and Scotch peas from the West at lower prices have forced a further decline here as trade is very dull.

## DRIED PEAS.

Samo inactivity previously noted is prevailing and no change is looked for in the near future. Values remain nominally about as last quoted.

Green Peas, California.....	2 40 @ 2 50
Niles Peas.....	2 15 @ 2 25

## WOOL.

Buyers continue to hold off, not only here but also in the Eastern centers. Wools are being held back in the country, and the market all round is in unsatisfactory shape. Asking rates, upon which quotations are now of necessity based, are without appreciable change. Receipts of California wools since February aggregate only 21,500 bags, while in corresponding period last year they footed up 46,000 bags.

## SPRING.

Humboldt and Mendocino.....	18 @ 20
Northern, free.....	15 @ 17
Northern, defective.....	12 @ 14
Middle Counties, free.....	15 @ 17
Middle Counties, defective.....	12 @ 14
Southern Mountain, 12 mos.....	10 @ 12
Southern Mountain, free, 7 mos.....	11 @ 13
Southern Mountain, defective, 7 mos.....	10 @ 12
Oregon Valley, fine.....	19 @ 21
Oregon Valley, coarse to medium.....	18 @ 19
Eastern Oregon, choice.....	16 @ 17
Eastern Oregon, fair to good.....	12 @ 15
Nevada, as to condition.....	15 @ 17
California Fall Lambs.....	.8 @ 10

## HOPS.

Market is displaying little life and is apt to continue in present inactive condition for about sixty days, after which period new crop hops will likely be offered in noteworthy quantity. Recent offerings of old have been mostly too common quality to receive noteworthy attention, either for shipment or on local account. Values for now arrivals show no quotable change, 9 @ 10c. being named for choice, but such hops as buyers are most eager to secure are not being offered freely at these figures.

Good to choice, 1899 crop.....	7 @ 10
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The following concerning the hop market is from a New York authority and is furnished through mail of late date:

Again the receipts have run quite heavy; they have been mostly of Pacific coast hops and include 1000 bales on through bills of lading for London. The movement from Oregon has continued so free that stocks in growers' hands there have been cut down to between 8000 and 10,000 bales; and the quantity in Washington and California is small. It is estimated that growers in New York State are holding less than 1,500 bales, the lightest stock ever known at this season of year. Occasional purchases are reported in range of 9 @ 11 1/2c., and the feeling is firm. Crop reports are not materially changed; in some sections the outlook is reasonably good while in others the yards have rather a ragged and weak appearance. In the local market business has remained quiet. Brewers have called for a moderate quantity of hops on old contracts, but new purchases have been mostly small and rather infrequent. Exporters have made some inquiries but they have not led to important business. The gradual reduction of stocks however leads

to a steady, possibly firm holding, particularly of the finest grades, but quotations are not materially changed. London mail advices are firmer; referring to the outlook for the English crop late reports say that "from the hop plantations come complaints of cold winds checking the growth of the vine, and crop prospects are not as cheerful as could be wished."

## HAY AND STRAW.

Arrivals of hay were lighter in the aggregate then for preceding week, but there was an abundance for immediate requirements, and the general condition of the market was without substantial improvement. Strictly choice new Wheat hay is not being urged to sale in great quantity, there being reason to believe that it will meet with a more favorable market later on. Straw market was slow and featureless.

	NEW HAY.
Wheat.....	7 00 @ 8 50
Oat, fair to good.....	5 00 @ 6 50

	OLD HAY.
Wheat.....	6 50 @ 10 00
Wheat and Oat.....	6 00 @ 9 00
Oat.....	6 00 @ 8 00
Barley.....	5 00 @ 7 00
Alfalfa.....	5 00 @ 7 00
Stock.....	4 50 @ 5 50
Compressed.....	7 00 @ 10 00
Straw, 1/2 bale.....	25 @ 37 1/2

## MILLSTUFFS.

There was no scarcity of Bran, but prices did not decline. Middlings and Shorts were held at unchanged rates. Rolled Barley and Milled Corn ruled steady, offerings not being excessive.

Bran, 1/2 ton.....	12 50 @ 13 00
Middlings.....	15 00 @ 18 00
Shorts Oregon.....	13 00 @ 15 00
Barley, Rolled.....	16 00 @ 16 50
Cornmeal.....	24 50 @ 25 00
Cracked Corn.....	25 00 @ 26 00

## SEEDS.

Mustard Seed is out of market. New crop is expected the latter part of next month, but the quantity will be light. In other seeds quoted herewith there is little doing, stocks of most description being too small to admit of any noteworthy operations.

	Per ctt.
Mustard, Trieste.....	— @ —
Mustard, Yellow.....	— @ —
Flax.....	— @ —
	Per lb.
Canary.....	3 1/4 @ 4
Rape.....	2 @ 3
Hemp.....	3 1/4 @ 4
Timothy.....	— @ —
Alfalfa, Utah.....	— @ —

## BAGS AND BAGGING.

In the Grain Bag market there is considerable business doing, but no fluctuations to record in prices. Seldom have values for this commodity kept on such a steady range as the present summer. Business in other bags is light and asking rates unchanged.

Calcutta Grain Bags, buyer June-July.....	— @ —
Calcutta Grain Bags, spot.....	6 1/4 @ 6 1/2
San Francisco Grain Bags, 22x36, spot.....	6 1/4 @ 6 1/2
Slate Prison Bags in lots of 2000, 1/2 100.....	5 65 @ —
Wool Sacks, 4 lbs.....	— @ 32 1/2
Wool Sacks, 3 1/2 lbs.....	— @ 28 1/2
Fleece Twine.....	7 1/4 @ —
Gunnies.....	— @ 12 1/2
Bean Bags.....	4 1/2 @ 5 1/4
Fruit Sacks, cotton.....	6 1/4 @ 7 1/4

## HIDES, PELTS AND TALLOW.

Market remains quiet and is not displaying any strength. It is probable, however, that values for all kinds of Hides have about touched bedrock.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	9 1/4	8 1/4
Medium Steers, 48 to 56 lbs.....	8 1/4	7 1/4
Light Steers, under 48 lbs.....	8 1/4	7 1/4
Heavy Cow Hides, over 50 lbs.....	8 1/4	7 1/4
Light Cow Hides, under 50 lbs.....	8 1/4	7 1/4
Wet Salted Kip.....	8 1/4	7 1/4
Wet Salted Veal.....	8 1/4	7 1/4
Wet Salted Calf.....	9	8
Dry Hides.....	17	14
Dry Kip and Veal, 11 to 16 lbs.....	16	12
Dry Calf, under 4 lbs.....	17	14
Salted Horse Hides, large.....	2 00 @ —	—
Salted Horse Hides, medium.....	1 50 @ —	—
Salted Horse Hides, small.....	1 00 @ —	—
Dry Horse Hides, large.....	1 50 @ —	—
Dry Horse Hides, small.....	75 @ 1 00	—
Dry Colts' Hides.....	50 @ —	—
Pelts, long wool, 1/2 skin.....	1 00 @ 1 25	—
Pelts, medium, 1/2 skin.....	70 @ 90	—
Pelts, short wool, 1/2 skin.....	35 @ 60	—
Pelts, shealing, 1/2 skin.....	20 @ 35	—
Deer Skins, best summer.....	27 1/4 @ 30	—
Deer Skins, good medium.....	20 @ 23 1/4	—
Deer Skins, thin winter.....	— @ 10	—
Elk Hides.....	10 @ 12	—
Tallow, good quality.....	4 @ —	—
Tallow, No. 2.....	3 @ 3 1/4	—
Goat Skins, perfect.....	30 @ 37 1/2	—
Goat Skins, damaged.....	10 @ 20	—
Kid Skins.....	5 @ 10	—

## HONEY.

The market is fairly supplied with Amber Extracted, which is arriving



mainly from the San Joaquin section, and is meeting with a moderate demand at current rates, both for shipment and local use. Water White honey is scarce, either Comb or Extracted. Choice Comb is inquired for, and in a small way is salable over figures warranted as a regular quotation.

Extracted, White Liquid.....	6½ @ 7
Extracted, Light Amber.....	5½ @ 6½
Extracted, Amber.....	5½ @ 5½
White Comb, 1 lb frames.....	12 @ 12½
Amber Comb.....	8 @ 10

#### BEE SWAX.

Little coming forward from any quarter. No trouble is experienced in securing custom for desirable qualities.

Good to choice, light, ½ lb.....	26 @ 27
Dark.....	24 @ 25

#### LIVE STOCK AND MEATS.

Market for Beef remained about as last quoted, with a narrower range in both quality and price than is ordinarily the case. Mutton was in light supply for the current demand, quotable rates showing an advance. Lamb and Veal sold at slightly firmer figures than preceding week, with latter in lightest supply. Hogs ruled steady, arrivals proving just about enough for immediate use.

Beef, first quality, dressed, net ½ lb.....	5½ @ 6
Beef, second quality.....	5½ @ 6
Beef, third quality.....	5 @ 5½
Mutton—ewes, 7@7½; wethers.....	7½ @ 8
Hogs, hard grain fed, medium.....	5½ @ 6
Hogs, small, fat.....	5½ @ 6
Hogs, large, hard.....	5½ @ —
Hogs, acorn-fed.....	— @ —
Hogs, feeders.....	5½ @ 5½
Hogs, country dressed.....	6 @ 6½
Veal, small, ½ lb.....	8 @ 10
Veal, large, ½ lb.....	8 @ 9
Lamb, spring, ½ lb.....	8½ @ —

#### POULTRY.

Most of the poultry now arriving is in rather poor condition, and this accounts to a great extent for the low prices prevailing for most kinds. Large and fat fowls are too scarce to be quoted in the regular list. Such of this sort as do come forward command ready sale and an advance on figures below noted. The weakness of the market is mainly on very small young and poor old.

Turkeys, dressed, ½ lb.....	— @ —
Turkeys, live hens, ½ lb.....	10 @ 11
Turkeys, live gobblers, ½ lb.....	9 @ 10
Hens, California, ½ dozen.....	4 00 @ 5 00
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	4 50 @ 5 50
Fryers.....	3 50 @ 4 00
Broilers, large.....	3 00 @ 3 50
Broilers, small.....	2 00 @ 2 50
Ducks, old, ½ dozen.....	3 00 @ 4 00
Ducks, young, ½ dozen.....	3 00 @ 4 00
Geese, ½ pair.....	1 25 @ 1 37½
Goslings, ½ pair.....	1 25 @ 1 37½
Pigeons, old, ½ dozen.....	1 25 @ 1 50
Pigeons, young.....	1 25 @ 1 50

#### BUTTER.

The market is heavily stocked with off grades, including the product of numerous creameries and dairies which early in the season and most of the time turn out a choice article. For defective qualities the market is weak and irregular. Choice to fancy is difficult to secure at present and is commanding in a small way for special trade higher prices than are warranted as quotations.

Creamery, extras, ½ lb.....	19 @ —
Creamery, firsts.....	18 @ 18½
Creamery, seconds.....	17½ @ 18
Dairy, select.....	17½ @ 18
Dairy, seconds.....	16½ @ 17
Dairy, soft and weedy.....	— @ —
Mixed store.....	14 @ 15
Creamery in tubs.....	19 @ 21
Pickled Roll.....	18 @ 20
Firkin, California, choice to select.....	19 @ 21
Firkin, common to fair.....	17 @ 18

#### CHEESE.

Tendency had been to more firmness, especially on stock sufficiently well seasoned not to be subject to heavy shrinkage. Where there is any selling pressure, it is on cheese too new to be desirable, or which showed decided defects. That market for choice to select will soon be any more favorable to buyers than at present is not probable.

California, fancy flat, new.....	9½ @ 10
California, good to choice.....	8½ @ 9
California, fair to good.....	8 @ 8½
California Cheddar.....	— @ —
California, "Young Americas".....	9½ @ 11

#### EGGS.

There were heavy stocks of warm weather eggs, and also liberal offerings out of cold storage, both domestic and Eastern product. With demand from consumers light, the market was naturally in unsatisfactory shape for the selling interest. A few eggs, known to be in every way of most desirable quality and suitable for the most particular trade, went to special custom at moderately firm figures and at higher rates than were quotable.

California, select, large, white and fresh.....	17 @ 18
California, select, irregular color & size.....	15½ @ 16½
California, good to choice store.....	13 @ 14
Eastern, as to section and grading.....	14 @ 16
Eastern, cold storage.....	— @ —

#### VEGETABLES.

While supplies of onions were not light, offerings were a little less liberal than preceding week and the market was slightly firmer. No pronounced changes in prices, however, are anticipated. Fluctuations in values of other vegetables in season were not very marked. Most descriptions were in sufficiently good request to keep values tolerably steady for most desirable qualities.

Asparagus, ½ box.....	75 @ 1 25
Beans, String, ½ lb.....	2 @ 3
Beans, Wax, ½ lb.....	2½ @ 4
Cabbage, choice garden, ½ 100.....	50 @ —
Caiflower, ½ dozen.....	50 @ —
Cucumbers, Bay, ½ box.....	50 @ 75
Egg Plant, ½ lb.....	4 @ 6
Garlic, ½ lb.....	2½ @ 3½
Green Corn, ½ sack.....	1 00 @ 1 25
Green Corn, Alameda, ½ crate.....	1 25 @ 1 50
Onions, Red, Cal., good to choice.....	75 @ 85
Onions, Yellow Danver, ½ cental.....	1 10 @ 1 25
Peas, Sweet, garden, ½ lb.....	2 @ 2½
Peas, Green, ½ sack.....	1 00 @ 1 50
Peppers, Green Chile, ½ lb.....	5 @ 7
Peppers, Bell, ½ lb.....	— @ —
Rhubarb, ½ box.....	25 @ 50
Squash, Summer, ½ large box.....	40 @ 60
Tomatoes, ½ small box.....	75 @ 1 00
Tomatoes, River, ½ large box.....	1 75 @ 2 00

#### POTATOES.

Demand was not very brisk most of the current week, either on local account or for shipment, and market lacked strength, especially for the ordinary run of offerings, although in the matter of quotable rates no material changes were effected. The weakness which existed was confined mainly to common qualities. Some extra select brought from special local custom an advance on our extreme quotation.

Burbanks, River, ½ cental.....	40 @ 80
Burbanks, Bay counties, ½ cental.....	50 @ 85
Burbanks, Humboldt.....	— @ —
Burbanks, Oregon.....	75 @ 90
River Reds.....	— @ —
Early Rose.....	— @ —
Garnet Chile.....	— @ —
New Potatoes, ½ cental.....	40 @ 1 00
Sweet, River, ½ cental.....	— @ —
Sweet, Merced.....	— @ —

#### The Fruit Market.

##### FRESH FRUITS.

It was the exception where supplies of fresh fruit of the different varieties now in season were particularly excessive the past week, especially of desirable qualities. Offerings in the aggregate were lighter than a few weeks ago, especially of Peaches and nearly all kinds of Berries. Cherries naturally showed a marked falling off in arrivals and will soon be wholly out of market. Common Apples and ordinary varieties of Pears inclined in favor of buyers, while choice Gravenstein Apples sold fairly well, being quotable up to \$1.00 per regular 50-lb. box, and choice Bartlett Pears did not lack for custom at \$1.25 per standard size box, a few select going at a moderate advance on this figure. Apricots brought fully as good figures as preceding week, some extra choice commanding up to \$30 per ton, but sales were mostly within range of \$20@25 per ton for desirable stock. In the Plum market the Burbank variety took the lead and commanded the best prices. Watermelons put in an appearance and brought tolerably firm figures, as is customary with early consignments. Melons of the Nutmeg variety were in fair supply for this date, with a great difference in size and quality, and a correspondingly wide range in prices. Cantaloupes were also on market.

Apples, fancy, 4-tier box.....	— @ —
Apples, good to choice, ½ 50-lb box.....	50 @ 1 00
Apples, common to fair, ½ 50-lb box.....	30 @ 40
Apricots, Royal, ½ crate.....	40 @ 65
Apricots, Royal, ½ box.....	30 @ 50
Apricots, Royal, ½ ton.....	15 00 @ 25 00
Blackberries, ½ chest.....	2 00 @ 4 00
Cantaloupes, ½ crate.....	3 00 @ 3 50
Cherries, Royal Anne, ½ box.....	50 @ 75
Cherries, Black Tartarian, ½ box.....	— @ —
Cherries, White and Red, ½ box.....	— @ —
Currants, Red, ½ chest.....	1 50 @ 4 00
Gooseberries, common, ½ lb.....	— @ —
Gooseberries, English, ½ lb.....	— @ —
Grapes, Thompson's Seedless, ½ crate.....	— @ —
Raspberries, ½ chest.....	3 00 @ 5 00
Logan Berries, ½ chest.....	5 00 @ 7 00
Nutmeg Melons, ½ crate.....	1 00 @ 1 50
Plums, ordinary varieties, ½ box.....	20 @ 40
Plums, fancy, ½ box.....	50 @ 65
Tragedy Prunes, ½ crate.....	35 @ 50
Peaches, ½ box.....	35 @ 50
Peaches, wrapped, ½ box.....	60 @ 75
Pears, Bartlett, ½ box.....	1 00 @ 1 25
Pears, common kinds, ½ box.....	25 @ 75
Figs, Black, ½ double layers.....	40 @ 60
Figs, single layer box.....	25 @ 40
Strawberries, Longworth, ½ chest.....	2 50 @ 5 00
Strawberries, Large, ½ chest.....	2 50 @ 4 00
Watermelons, ½ crate.....	3 00 @ 4 00

##### DRIED FRUITS.

In the market for cured and evaporated fruits there is no immediate business to report, on either foreign or Eastern account, but an active demand from local handlers for choice Apricots in the filling of orders booked before the opening of the season. It is estimated that for this

purpose from 200 to 250 carloads will be required for Europe, and from 100 to 150 carloads for Eastern points. Most of these orders were taken at good figures, and the dealers filling them are using more than ordinary care, desiring to prevent giving foreign and Eastern buyers any opportunity for rejecting deliveries. Most of the purchasing is being done in the Vacaville and Winters section, which furnishes the best early fruit. For desirable qualities in above named district 6@6½c in the sweat boxes is being paid. In some other portions of the State furnishing early deliveries there have been rejections, handlers fearing to risk the quality in filling these early orders, and not caring in most instances to purchase otherwise at present, although common to fair Apricots, mostly in the southern district, are obtainable at 4½@5½c in the sweat boxes. While there is an active demand for choice Apricots, with market firm at prevailing rates, low-grade stock is being neglected. New Peaches are reported being offered in a speculative way at 5½c for prime in sacks, Aug.-Sept. delivery, but no desire on part of Eastern dealers to operate until the goods are ready for market. Prices for new crop Prunes have not yet been named. In last year's fruit there is scarcely anything doing, values for same remaining nominally unchanged.

##### EVAPORATED OR BLEACHED.

Apricots, Royal, in sacks, ½ lb.....	6½ @ 7
Apricots, Royal, fancy.....	— @ —
Apricots, Moorpark.....	— @ —
Apples, in 50-lb boxes, rings, pressed, fancy.....	5½ @ 5½
Apples, 50-lb boxes, rings, pressed, good to choice.....	4 @ 4½
Figs, White, fancy pressed.....	5½ @ 5½
Peaches, unpeeled, good to choice.....	4 @ 5
Peaches, unpeeled, fancy.....	6½ @ 7½
Peaches, peeled, in boxes.....	12 @ 15
Pears, unpeeled Bartletts, halved, fancy.....	9 @ 9½
Pears, halved, unpeeled Bartletts.....	6½ @ 7½
Pears, quartered, unpeeled Bartletts.....	6½ @ 7½
Plums, Black, pitted.....	6½ @ 7½
Plums, White and Red.....	7 @ 8
Prunes, in sacks, 40—50s.....	4 @ 4½
50—60s.....	3½ @ 3½
60—70s.....	3½ @ 3½
70—80s.....	2½ @ 3
Prunes in boxes, ½c higher for 25-lb boxes, ½c higher for 50-lb boxes.....	4 @ 6
Prunes, Silver.....	4 @ 6

##### COMMON SUN-DRIED.

Apples, sliced.....	3 @ 3½
Apples, quartered.....	3½ @ 4½
Figs, Black.....	2 @ 3
Figs, White.....	3 @ 3½
Peaches, unpeeled.....	3 @ 4

Mail advices of late date from New York City furnish the following report of the dried fruit market:

The market has shown no improvement this week on evaporated apples; offerings are more than equal to the moderate demand prevailing and prices rule low and in buyers' favor. Sun-dried apples very quiet and quotations little more than nominal. Chops and waste also dull and weak with outside quotations extreme, and some defective stock is available below inside figures. Raspberries firmer in tone under advices of crop failure. Cherries steady. California fruit moving slowly.

Apricots, Cal., Moorpark, ½ lb.....	12½ @ 13½
Apricots, Cal., Royal, ½ lb.....	10½ @ 12
Peaches, Cal., unpeeled, in bxs, ½ lb.....	7 @ 8½
Peaches, Cal., unpeeled, in bags, ½ lb.....	6 @ 7½
Prunes, Cal., ½ lb.....	4 @ 7

##### RAISINS.

The same lifeless market for spot stock as before noted. No noteworthy business is looked for until prices are settled upon for early deliveries of coming crop.

##### CITRUS FRUITS.

Oranges are offering in quotable quantity out of cold storage, but are meeting with scarcely any demand, more seasonable fruit being taken in preference. Lemons have been in good request, with market firm for choice to select and quotably higher. In market for Limes there were no changes in values.

Oranges—Navels, fancy ½ box.....	— @ —
Navels, good to choice.....	2 50 @ 3 00
Navels, common to fair.....	1 50 @ 2 00
Valencias.....	1 75 @ 2 25
St. Michaels.....	1 50 @ 2 50
Mediterranean Sweet.....	1 25 @ 2 25
California Seedlings.....	1 00 @ 1 75
Lemons—California, select, ½ box.....	3 00 @ 3 50
California, good to choice.....	2 00 @ 2 50
California, common to fair.....	1 00 @ 1 50
Limes—Mexican, ½ box.....	4 00 @ 4 50
California, small box.....	50 @ 1 00

##### NUTS.

A good inquiry is reported for new crop Almonds and the Hatch varieties are being contracted for forward delivery at 10@11c. New crop Walnuts are being offered for forward delivery at 10c for No. 1 soft shell, with buyers' views about 1½@2c less. Quotations for old are nominal, with stocks light and no demand for same.

California Almonds, shelled.....	14 @ 17
California Almonds, paper shell, ½ lb.....	10 @ 12
California Almonds, soft shell.....	8 @ 9
California Almonds, hard shell.....	4 @ 5
Walnuts, White, soft shell.....	9 @ 10

Walnuts, White, California, standard.....	7 @ 8
Chestnuts, California Italian.....	8 @ 10
Peanuts, California, fair to prime.....	5 @ 6
Peanuts, Eastern, hand-picked.....	6 @ 6½
Pine Nuts.....	5 @ 6

##### WINE.

The market in this center is quiet, and there is nothing at the moment to warrant anticipating any change of consequence in the near future, either in quotable rates or general tone. Offerings from first hands and holdings by the same are now of rather light volume, admitting of no extensive trading. The wholesale market for dry wines of last year's vintage remains quotable at 14@16c per gallon. Some of superior quality or in high favor with the trade is held 2@4c per gallon higher, these figures being obtainable only in a small way from special custom.

##### Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, '99.	Same time last year.
Flour, ¼ sacks.....	118,629	5,603,484
Wheat, centals.....	189,222	7,149,240
Barley, centals.....	132,854	5,227,285
Oats, centals.....	12,655	809,119
Corn, centals.....	4,605	160,501
Rye, centals.....	1,040	106,727
Beans, sacks.....	2,416	368,070
Potatoes, sacks.....	19,824	1,258,882
Onions, sacks.....	2,912	175,074
Hay, tons.....	3,365	158,327
Wool, bales.....	790	60,866
Hops, bales.....	10,646	11,766

##### EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, '99.	Same time last year.
Flour, ¼ sacks.....	39,220	4,319,054
Wheat, centals.....	137,966	6,442,078
Barley, centals.....	1,758	3,970,032
Oats, centals.....	652	47,891
Corn, centals.....	329	23,613
Beans, sacks.....	390	27,686
Hay, bales.....	1,293	143,155
Wool, pounds.....	4,754,123	1,792,407
Hops, pounds.....	260	1,103,502
Honey, cases.....	3,583	5,580
Potatoes, packages.....	1,775	76,844

##### California Dried Fruit at New York.

NEW YORK, July 3.—Evaporated apples, common, 4½@5c; prime wire tray, 5½@5½c; choice, 5½@6½c; fancy, 7@7½c. California dried fruits.—Market dull, values remaining nominally as last noted. Prunes, 3½@7c. Apricots, Royal, 12½@14c; Moorpark, 15@18c. Peaches, unpeeled, 6@9c; peeled, 16@20c.

##### American Enterprise at Paris.

Among other striking and original exhibits at the Paris Exposition of 1900 is a large map of the United States, 18x15 feet, exhibited by the Lord & Thomas Advertising Agency, Chicago and New York, constructed as to show the various details concerning State areas and population, number of publications in each, circulation per issue, percentage of circulation to population, value of publishing plants, number of employees, average hours of labor, average wages paid and average cost per inch for yearly advertising. Information of this nature is of especial value to advertisers, showing as it does the best locations in which to place advertising to reach the greatest number of people and secure best results.

Copies of this valuable map will be sent free on request to all advertisers who address Lord & Thomas, Trude building, Chicago.

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Position as superintendent or manager of large fruit ranch. Thorough experience in handling fruit and men. Thirty years' general business experience. Understand bookkeeping. Good references. Address J. S., this office.

**WANTED.**  
Place as foreman or manager on ranch. Fifteen years' experience. Best possible recommendation. F. F. HOLBROOK, Cosmopolitan Hotel, S. F.



## FORESTRY.

### Forestry for Southern California.

By HON. ABBOT KINNEY at Southern California Pomological Society.

Practical forestry as taught and demonstrated includes the treatment of watersheds. France is the country that has done most on this side of forestry. In fact until recently France alone has done important scientific forest work in the study and treatment of mountain watersheds. That part of forestry most treated and generally most immediately important is the forest crop. It is the growing, cutting and disposition of timber and other products of the forest that absorb most of the European forest students' time. In much of our country the proper age of trees for cutting, the best methods of treating subsidiary products, of preventing waste, of securing reproduction of the trees, united to the conditions where they are to be grown and to the markets for which they are destined, will also be a large if not dominant part of forest study and of practical forest management.

**THE MOST IMPORTANT POINT.**—In southern California and Arizona, however, this side of forestry is not the most important. In southern California the first forest question is the treatment of the mountain watershed. This question is so large with us that it makes all other forest questions subordinate to it. Everything else in our forestry is in fact of no importance compared with the protection of forest covering on mountain watersheds. We must protect and maintain the mountain forests on account of dangers of floods on one side and of the safety of the continued supply of water from springs and streams on the other. Where the watersheds have been denuded we must re-establish the forest cover, and the sooner we do it the easier it will be done. Denuded watersheds that are steep, lose immense amounts of soil during our diluvial rains. It is, therefore, certain that the longer a burned mountain remains bare the less soil it will have and the harder it will be to make new trees succeed. Fires in the forests we must stop. Every camper and every person going into a forest for any purpose should use the greatest caution about fire. Matches should always be put out before being dropped; cigar stumps should never be thrown into the forest floor. They should be stamped out. Every fire lit should be extinguished by water before being left. The central sun of our forest student's firmament is Fire. How to guard against the spread of fire; how to extinguish fire, and above all, how to prevent fire setting. These are questions of vital import to the agricultural life of California.

**MAN THE Foe OF THE FOREST.**—Spontaneous combustion may set forest fires. Lightning, perhaps, does sometimes set forest fires, but as it is invariably accompanied by rain we cannot consider this any more important as a source of forest fires than the other. Forest fires are set by men. Man is the only fire-setter we need fear. Fires are set—sometimes by accident and sometimes by pure neglect. Deliberate setting of forest fires is unfortunately one of the principal causes of forest destruction. We are convinced that the most disastrous forest fires are set in this way. Southern California has had forestry preached to it for twenty-one years by forest enthusiasts. Nature has been preaching forestry since man's occupation of the country. Any one with eyes can read about the forestry of watersheds out of the book of Nature. This book is always wide open before us. The first scars on the mountains are accomplished by torrent scars in the valleys. Diminished or dried up springs force upon us the duty of guarding the forest water insurance. We have in southern California a climate that requires conservation of moisture. A long dry season is followed by irregular rains, often diluvial in character. To this climatic condition is added the topography of the country in accentuating the vital need of forestry for our safety. California is a mountainous country. In southern California mountains are never out of sight. The forest covering of the mountains determines the delivery of the rainfall from them. The denser the covering the more prolonged will be the delivery of the rainfall. The more denuded the mountains are the more sudden and short will be the rain delivery. With forests, springs and streams are permanent. Without forests, the springs lessen and disappear and the destructive torrent takes their place. Floods and drying winds replace streams and springs as the forests are destroyed.

**GOVERNMENT FORESTRY.**—The Government was first induced to stop selling its most important mountain forests. Such districts were set apart as Forest Reserves. While the limits and location of some of these reserves were not beyond criticism the general policy was sound. The Government had a Division of Forestry long before this, but it was a sort of missionary affair without power or duties of a practical kind. The next step taken was the detail of some of the army to police part of the forests. The army details were effective in keeping sheep out of the districts where they were stationed. Otherwise they were of little value. The army was confined to the Forest Reserves called National Parks. Next came the care of the Forest Reserves

proper. A measure to start a forest system of protection for these reserves was put through Congress by a patronage deal. To carry out the terms of the trade, the new force was put under the charge of the Land Commissioner in the Department of the Interior. The skilled Government Foresters and the Division of Forestry were ignored. The patronage deal left the high-salaried men, like superintendents and supervisors, to the appointment as spoils of the Eastern professional patriots, while the local rangers were to be in the hands of the various Republican Central Committees. The result of this has of course and inevitably been that this new forest force, of such vital importance to us, is composed of politicians or the relatives of competent politicians, but has no foresters in it. As far as we know this political forestry force does not contain a single, solitary forester. The last step toward national forestry is in sight. This is the growth and recognition of the Division of Forestry and its skilled officers, and the gradual transfer to it of forest duties and forest charge. This is indicated as likely to be complete within the next few years. Let us hope that the forests will not be all sheep-killed or fire-killed before that time.

**RESOLUTIONS.**—Mr. Kinney then offered the following resolutions, which were enthusiastically adopted:

Resolved, That the preservation of the mountain watersheds is of vital importance to southern California.

Resolved, That this society is strongly in favor of a national forest management under competent men appointed and retained on the merit system and according to civil service rules.

Resolved, That this society is opposed to the mismanagement, cost and confusion in forestry work due to the forest service now under the Department of the Interior being used to satisfy political obligations.

Resolved, That we are convinced that the entire forestry work of the United States should be in one bureau, free from politics and in the hands of skilled foresters.

Resolved, That the climate, torrent tendencies, steep sierras and liability to destructive forest fires that diminish the permanent water supply and increase the force of dry winds and the destructive volume of sudden floods in southern California create local conditions that force us for the safety of the country to denounce the neglect and incompetency of a political forestry system with politics first and forestry nowhere.

## THE POULTRY YARD.

### Cajoling the Hens.

Tchick, tchicker,  
Sneeze and ker-snickler!

Pepper their grub and they'll lay for ye quicker,  
There's nothin' smells better than steamin' bran mash;  
When I pound on the basin, them hens make a dash  
And they'll crowd and they'll gobble, they'll sneeze and  
they'll peck—

A-gulpin' it down till they're full to the neck.  
They relish it so that I vum and declare  
It's good for my appetite watchin' 'em there.  
And if biscuits are done by the time I go in,  
I'm apt to pull up and clean out the whole tin.  
I'm long, sir, on grub, a believer in feedin',  
I think it goes furdur than blue blood or breedin'.  
Ev'ry hen that I've got is so pussey, by jing,  
She can't tuck her noddle round under her wing;  
And bein' she's wakeful and broke of her rest  
She'll always hop down for a turn on the nest.  
So I git double work, s'r, by usin' 'em right,  
One egg per hen daytimes—one egg ev'ry night!  
And they're livin' like ladies on mash and chopped  
meat

With all the red pepper and corn they can eat.

Tchick, tchick!

They're makin' no kick,  
And if nothin' don't split I'll be rich putty quick.

—Lewiston Journal.

### An Enquirer Answered.

**TO THE EDITOR:**—I intend going in for poultry farming in Los Angeles. I noticed in one of your papers that the way to keep poultry is to erect so many yards and houses and put twenty fowls in each yard; by that way you keep 640 hens to the acre. Would I be able to succeed if I followed my system which I thought of following, that is to keep 500 fowls on an acre or two of land with a house in the center of the land and sow one-half acre or one-quarter acre in alfalfa and you would have no green feed to cut, the fowls would get their green feed much fresher and when they would require it, and all I would do would be to keep the houses clean and give them water and grain, etc. The hens would be of the same age and no reesters would be with them. I would have a separate yard for breeding stocks, chicks, etc. I would want less capital to start with and could do other things in the meantime. How many fowls (laying hens) could I keep, I alone doing all the work?—E. D. GIB, Los Angeles.

**TO THE EDITOR:**—Commenting on the questions of your Los Angeles correspondent, who asks if he would meet with success if he kept 500 hens on an acre of land, with a house in the center, and having a patch of alfalfa upon which the fowls would be turned; the writer has this to say:

What follows regarding the above-mentioned plan is not at all dogmatic but merely hints from one who has had a comparatively limited experience. First, as regards the buildings. Properly arranged, many steps will be saved. If one keeps many hens this should be one of the first considerations. Some prefer isolated houses, or colonies, located in the

center or at one end of the yards. Others are in favor of connected houses. There are good arguments in favor of both. After some experience the writer thinks many steps daily—which means miles of travel yearly—will be saved if the buildings connect.

In this case should one erect buildings in a straight line or in a horseshoe shape? A poultry raiser of years of experience who has a long straight line of houses says if new buildings were to be erected they would be on a curve, so that when the keeper was through feeding and watering he would be at nearly the point where he commenced.

One plan the enquirer might adopt is to erect a building of convenient size in the center of his land, letting the yards radiate therefrom to any desired distance. It is practical and will save much time and miles of travel.

We might save ourselves much toil and many steps did we better plan our poultry houses and the disposition of your chicken coops. Substitute properly arranged brooder houses for chicken coops and a great saving would be made. Poultry keeping in all its details needs much thought and planning. Each year we see where our mistakes have been made or where improvements can be made.

As to whether it is better to let hens run at will upon plots of alfalfa or to feed it out in short lengths is a matter for one to decide for himself. Feed green alfalfa by all means if it can be obtained. If fowls roam over it much will be trampled down and wasted. I think I would prefer to mow the grass and run it through one of the cutters to be obtained at any poultry supply house; the fowls will eat it better and there will be no danger of being "crop-bound."

The enquirer might think this plan requires considerable extra labor, but one cannot shirk details and expect to meet with the greatest success; there is more, much more, than to keep poultry houses clean and give the hens grain, water, etc. But if one has in mind a plan he thinks will succeed let him try it, and if it is not perfect he will find out before long and then proper alterations can be made.

How many fowls can I keep and alone do the work?" asks the enquirer. I am not prepared to answer this. It would depend much upon the location or the grouping of the buildings and further upon the amount of time at one's disposal. Five hundred could be readily cared for in the judgment of the writer.

A. WARREN ROBINSON.

Napa.

### Effect of Inclination.

From tests made by the Government Office of Road Inquiry the following table has been compiled, which shows the tractive force necessary to haul a load of one ton on roads of the best macadam on the grades given. The table also gives the equivalent length of each mile of grade in miles of level road:

Rate of inclination.	Angle with the level.	Tractive force, pounds.	Equivalent length of level road in miles.
Level	0 00 00	38	1.00
1 in 500	0 6 53	42	1.10
1 in 100	0 34 23	58	1.52
1 in 80	0 42 58	63	1.66
1 in 60	0 57 18	71	1.87
1 in 50	1 08 16	78	2.05
1 in 40	1 25 57	88	2.30
1 in 30	1 54 37	104	2.73
1 in 25	2 17 26	118	3.10
1 in 20	2 51 21	138	3.63
1 in 15	3 48 51	171	4.50
1 in 10	5 42 58	238	6.26

THERE are several rules by which to calculate the volume of water a given sized pipe line with a given fall will furnish, and, for one who knows how much water he requires, to determine the size of pipe required. To answer both questions the following formulas will suffice: For velocity in second-feet for rough pipe,  $V = \text{velocity}$ ,  $D = \text{diameter of pipe in feet}$  and  $H = \text{the fall in feet per 1000 feet}$  —  $V = \sqrt{D \times H \times 1.5}$ . To find the quantity delivered by a pipe line use this formula:  $Q = D^2 \times \sqrt{D \times H}$ ,  $Q = \text{quantity in U. S. gallons per minute}$ ,  $D = \text{diameter of pipe in inches}$ , and  $H = \text{fall in feet per 1000 feet}$ . By transposition in the last formula  $D^5 = \frac{Q^2}{H}$ ; that

is, that knowing the quantity desired in gallons, and the fall from the proposed head of pipe line to point of delivery, the diameter in inches of required pipe can be found by dividing the square of the quantity by the fall in feet per 1000 feet, and extracting the fifth root of the quotient.

THE Best Manufacturing Co., San Leandro, Cal., make a freighting wagon for use with their traction engines; the running gear is wholly of iron and steel, the bed is of wood, although it can be constructed of steel if desired; capacity sixteen tons; the tires are 16 inches wide, 3/4 inch thick; the front axle is a little longer than the rear one, so that the front wheels lap on the track of the drive wheels of the engine about one-half the width of the inner edge; the rear wheels lap about one-third the width of the front ones on the inner edge, thus rolling the road smooth.

WATERS injurious to boilers are mainly alkaline, or chalk, water; neutral, or gypsum, water; acid water. The first and second form scale, the last dissolves the plates.



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## THE STOCK YARD.

### Belgian Points and Suggestions.

The first open meeting of the Central California Belgian Hare Club, held in Oakland last week, proved a great success. The attendance was very large, many visitors being present. The principal feature of the meeting was a paper on the Belgian hare, read by Vice-President H. Pittock of Elmhurst. The following extracts by the Oakland Enquirer will prove interesting:

□The Belgian hare is not a hare, but a rabbit, pure and simple, bred after the similitude of the English hare, a scientific blending of the best of three nations—the red, the white and the black—the Belgian, the English and the Dutch. But I hear some one say, "What is that to us? That is a thing of the past." True; but, knowing the past, we can the more intelligently manage and direct the present and future. Hence we will briefly consider its general makeup in the order of its assimilation of the prime factors entering into the same as follows:

**THE PRIME FACTORS.**—First, the little red Belgian rabbit; second, the large white English rabbit; third, the small black Dutch rabbit. Hence we have three prime factors and three distinct forms or types, differing widely in their characteristics.

We will first consider the little red Belgian, for, though the least, it justly deserves first consideration, as, whether we consider the hare from the German or the English standpoint, it stands the same as the original first factor, and from it we get our background in form, color and motion. Its color is a beautiful rich red of various changing tints as season, condition or age may affect it. Its form is fine, slender and graceful, and its motion quick, easy, graceful, swift, shy and timorous. Hence you will readily see that it is the most essential factor, therefore the one most to be considered and ever to be kept in view, for over sixty of the much-coveted 100 points came from the little red Belgian.

The white, derived from the large white English rabbit, and of very little value, save for its bulk or size. Its color and form we are ever trying to wipe out or subdue, save on the tail. Hence, while the English hare has added least to the general makeup, English breeders have without question done more towards its improvement and general perfection along an artist's or fancier's standpoint, for the long, racy, graceful, slick, handsome creature of to-day, commanding the fancy prices, is purely an English product, bred under the English standard of perfection, while the heavyweights may, with equal fairness, be credited to the Germans, who have made utility or meat the first consideration, and are getting their reward in the millions of dollars' worth of the same exported yearly to England.

The little black Dutch rabbit, though small and often considered insignificant, is a very important factor and can never be ignored with impunity by either the fancier or utility breeder, for it is essential to both. To the fancier he furnishes the points—lacing, ticking and rich shadings—while to the utility

breeder its strength, hardihood, and vitality must be a prime consideration, for, as all extensive breeders know, the black will survive where all others perish. Its superior hardihood is clearly manifested in its frequent appearance among the best and purest Belgian families. As you value the hardihood or beauty of your herd, don't be too anxious to weed it out, but rather receive it as an assurance that all is well. If one fails to appear out of each 100 born, be assured that you are approaching the danger point, and see that you at once veer to the black. Some of our most famous English fanciers have done this, as is shown in the breeding of their most noted sires. I quote from Belgian Fancier of June 14, 1900:

"Mr. John Roberts of Long Beach was in the city on Tuesday. He has a litter of black Belgians that came from a Sir Styles doe and Lord Britain buck. There was one little brown one in the litter. A Banbury doe bred to a Lord Britain buck threw one black one. A white nurse doe bred to a Lord Britain buck threw one black one. Other breedings of this buck brought only brown Belgians."

Many other instances could be quoted.

**BREEDING FANCY STOCK.**—In breeding the hare for a domestic pet and companion the fancier's skill is brought most into play, for style and beauty are the chief requisites, and it is from this class the \$500 to \$1000 specimens are obtained. The most casual observer has doubtless noticed that they have mostly come from England, as they have been bred to the English standard. It behooves us as novices to stay close to it until we have fully demonstrated, by superiority of specimens—American born and of American parentage—that we have excelled in breeding. The mere raising of one fine specimen from imported parentage does not demonstrate our superior wisdom or science.

The market for such specimens is practically inexhaustible, and will so continue for years—doubtless for my lifetime and in all probability for yours. That it is remunerative and will so continue, a moment's reflection and a mental comparison of the population of the United States with that of England, where it has so proved for over fifty years and is to-day more so than ever, should be conclusive to all.

**AS A FUR PRODUCER.**—As a fur-bearing animal the Belgian hare is in great demand, and owing to the rapid extinction of wild fur-bearing animals will become more and more so as it becomes better known and more available, but we must look to the colder districts for superiority in that line, while the warmer districts will excel in the production of fancy specimens. Hence the laws of nature are equitable in this as in other lines of business.

**AS A MEAT PRODUCER.**—As a meat producer it has no equal in quantity, quality or economy of production, and were that its only recommendation it would be sufficient to justify its great popularity. It gives me pleasure to report that good, reliable breeders here in Alameda county report business in a much healthier condition than at any previous time, for, while prices are not quite so high, they have settled down to a comparatively fixed basis, and we can now breed calmly and understandingly, with the full assurance that there is a good, remunerative market for all we can raise.

A few months ago a lot of speculators rushed into the business. To-day they are gone. The earnest, persistent breeders will work for the up-building of the industry along fancy and utility lines, as their individual tastes may dictate, and ten years from now you will find them still at it, with improved ways, improved hares and increased profits.

**BELGIANS IN ENGLAND.**—Charles H. Harker of the Fanciers' Monthly, who has just returned from an extended visit in England, explained briefly the manner in which hares are judged by comparison in English shows, where, he said, the score card is looked upon with suspicion. He answered many questions regarding the breeding of hares in England, thereby giving much valu-

able information to his auditors. He said, among other things, that the breeding of Belgian hares in England was not on a meat-producing basis and never would be. All the rabbits used as meat in England are brought from Holland by the shipload. The fanciers of England, as a rule, do not go into the business for the money there is in it, but to produce fine specimens. One thing which makes the industry popular is the fact that one or two shows are going on in some part of England all the time, the most important show being the Lincoln.

The absence of slobbers in England, Mr. Harker said, was accounted for by the fact that there breeders fed about one-tenth as much as those of this country do. They never allow feed or water to stand in the hutchers, the usual feed being a handful of oats and a wisp of hay for each twenty-four hours, with a drink of water in the morning.

Another thing Mr. Harker called attention to was the tendency here to raise too many young. In England the ideal number is four, while many breeders never attempt to raise more than two.

One interesting feature was brought out by a question as to the average age of a Belgian hare. Mr. Harker told of a visit to a well-known breeder in Grunsby, England, who had the mother of Champion Fashoda, an animal six years old and still in fine condition.

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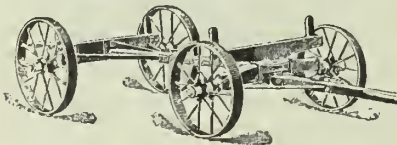
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This property will be ready for sale and rent after July 15th, 1900.  
The closest personal inspection of the land by proposed purchasers and tenants is invited.  
For further particulars, address

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## Patrons of Husbandry.

### Fair Oaks Grange.

Recently Sacramento Pomona Grange paid a friendly visit to the growing Grange at Fair Oaks. As reported in the Record-Union a large delegation arrived before noon, and the first part of the day was used in giving a class the final degrees of the order. This was a large class, and the work, under the direction of Pomona Grange, was so well illustrated and exemplified that every member present of Fair Oaks saw new reasons for the existence of the Patrons of Husbandry.

The feast was one of the class of feasts that have always characterized Fair Oaks women. The hall was full and the dining-room fuller. But many baskets were gathered up after the multitude had passed under the shade of the spreading oaks. Here for two hours addresses were given by the members of the visiting Grange, which, for good speaking, literary merit, elevated thought and deep sincerity were such as are rarely heard at a public gathering. There were present three Past Grand Masters of the Patrons of Husbandry, two of them old in the service.

Worthy Master J. D. Cornell of Pomona Grange gave an address on "The Mission of the Order, and the Results of Its Work." Mr. Cornell is a ready and fluent speaker, and his address commanded the attention of every one. His direct and straightforward presentation of his thoughts gave the keynote to all that followed.

One of the best addresses of the day was given by Mrs. Dunn. Ex-Senator Johnston, Mr. Flint, W. W. Greer, E. Greer, Mr. Daly, Professor Chase and many others made brief remarks.

The Record-Union report states that at the last State Grange meeting a committee was appointed to look into the matter of adopting a secondary school for the education of the sons and daughters of the farmers. It was announced that this committee has visited the academy at Fair Oaks, and have already decided to recommend it as such an institution for the patrons to adopt.

### \$100 Reward, \$100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

Address: F. J. CHENEY & CO., Toledo, O.  
Sold by Druggists, 75c.  
Hall's Family Pills are the best.

### Strong Endorsement for the Bug Bane Tree Wash.

Chula Vista, Cal. Jan. 6, 1900.  
G. D. Stead Soap Co., San Diego, Cal.—Gentlemen: We have tried every Tree Wash that has been brought to our attention; and the fact that we have used upwards of twenty tons of your wash the past year should be ample proof that we consider it the best and most effective Tree Wash on the market. Yours respectfully, H. COPELAND, Horticultural Supt., San Diego Land & Town Co.

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### List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
PIONEER PATENT SOLICITORS  
FOR PACIFIC COAST.

FOR THE WEEK ENDING JUNE 19, 1900.

- 651,824.—TRACE FASTENER—F. T. Cambern, Walla Walla, Wash.  
652,081.—MANUFACTURE OF GAS—J. W. Chisholm, San Francisco.  
652,082.—WATER GAS GENERATOR—J. W. Chisholm, San Francisco.  
652,086.—PROWSHARE—C. C. Coffinberry, Union, Or.  
652,232.—FIRE DEFLATOR—C. A. Culp, Pacific Grove, Cal.  
651,853.—STORAGE BATTERY—Hanscom & Hough, San Francisco.  
652,227.—FURNACE—A. Heberer, Alameda, Cal.  
651,861.—ROTARY ENGINE—J. B. Kelly, Portland, Or.  
651,862.—MOTOR—J. B. Kelly, Portland, Or.  
651,863.—VALVE GEAR—J. B. Kelly, Portland, Or.  
651,864.—PISTON—J. B. Kelly, Portland, Or.  
651,865.—CROSSCUT SAW—J. B. Kelly, Portland, Or.  
652,228.—VALVE REGULATOR—J. B. Kelly, Portland, Or.  
652,123.—PROPELLER—P. G. Lavigne, Napa, Cal.  
651,948.—FILTER—R. P. Lawson, Los Angeles, Cal.  
651,944.—SCREWDRIVER—T. R. Lillie, Lodi, Cal.  
652,217.—ELECTRIC BELT—M. A. McLaughlin, Los Angeles, Cal.  
651,950.—BOOK—S. M. Morden, Portland, Or.  
651,974.—GRAIN DOOR—J. C. R. A. & W. J. Munro, Sedro Woolley, Wash.  
651,928.—UPHOLSTERY—E. G. Neuman, Ferndale, Cal.  
653,143.—WATER ELEVATOR—H. Room, Ophir, Wash.  
651,956.—PISTON PACKING RINGS—R. E. Strait, Sacramento, Cal.  
652,054.—CARBURETING LAMP—A. L. Taber, Corona, Cal.  
651,957.—PLASTERING COLUMNS—J. R. Tobin, San Francisco.  
651,958.—MAIL BOX—G. Trevett, San Jose, Cal.



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## TRACK AND FARM.

### The Races at the Coming State Fair.

The Speed Committee of the State Agricultural Society met in Sacramento Saturday last and agreed on the speed program to be given at the State Fair next September, of which the Record-Union gives an outline. The committee determined to provide for two trotting or pacing races and three running races for each day during the fair. For trotting and pacing races the program adopted provides for sixteen nomination stakes and four purses for named horses.

The running program, so far as arranged for at the meeting, consists of six stake races. The remaining portion of the running program will be arranged for just prior to the commencement of the fair, and will consist of running purses, to which entrances will close over night.

In the trotting and pacing classes \$1000 purses will be given in every instance, which will guarantee one of the greatest harness meetings ever held in the State.

The trotting classes agreed on are: A green class, 2:24, 2:21, 2:19, 2:17, 2:15, 2:12, 2:10, and a free-for-all class.

In the pacing events there is provided a green class, a 2:18, 2:15, 2:13, 2:11, 2:10, and a free-for-all class. These are all nomination stakes, to which entrance closes July 23d, the horses to be named and eligible August 18th. The object in naming the horses so late, and requiring them to be eligible at the time they are named, is to insure close contests and to prevent horses which have shown their ability to outspeed other horses from contesting in the same race with them to enter in the slower classes.

In addition to the nomination stakes above provided for, there are to be 2:30 and 2:26 class trotting races and 2:25 and 2:21 class pacing races. These races are to close July 23d, but are to be open to all horses which have not records prior to July 1st of this year.

These latter races are added for the benefit of horsemen who had green horses which they had developed at considerable expense, and which they wished to race through the northern circuit, and which might take faster records, which their owners did not wish, and which would debar them from the privilege of trotting at the State Fair.

The eight running stakes provided are as follows:

No. 1.—The Vinctor Stake for three-year-olds and upward, entrance \$30, to which the society adds \$400, of which \$70 to second and \$30 to third horse. The stake to be named after the winner if Vinctor's time (1:40) is beaten.

No. 2.—The Dewey Selling Stake for three-year-olds and upwards, entrance \$20, to which the society adds \$400, of which \$70 to second, \$30 to third.

No. 3.—The Capital City stake, a handicap for three-year-olds and upwards, entrance \$30, to which the society adds \$400, of which \$70 goes to second and \$30 to third.

No. 4.—The Favorite Stake, a handicap for three-year-olds and upwards, entrance \$40, to which the society adds \$500, of which \$100 goes to second and \$50 to third.

No. 5.—The Sunny Slope Stake for two-year-old fillies, entrance \$25, to which the society adds \$300, of which \$50 to the second and \$25 to third.

No. 6.—The California Annual Stake for two-year-olds, entrance \$30 to which the society adds \$500, of which \$100 to second and \$50 to third.

No. 7.—The Shafter Selling Stake for maiden two-year-olds, entrance \$25, to which the society adds \$300, of which \$50 to second and \$25 to third.

No. 8.—The Flash Stake for all ages, entrance \$30, to which the society adds \$400, of which \$70 to second and \$30 to third.

In addition to these stakes the Occident and Stanford Stakes for three-year-old trotters will be contested at the fair, while the Annual Futurity

Running Stake, offered by the society, will be run at that time.

The program agreed upon was the result of a great deal of investigation and careful effort to suit the conditions prevailing in California this year.

Some of the best horses in training in the State will race here this year, and it was the desire of the association to give such purses in such classes as would bring together the best horses here, and to so classify them that they would be required to make the best possible races.

### The San Francisco and San Mateo District Fair.

We alluded recently to the great effort which is being put forth to make the San Francisco and San Mateo Fair a great success. Arrangements are proceeding rapidly, and it is desired that the attention of exhibitors be drawn to the opportunity which this exhibition affords for public display, for accurate judging by acknowledged experts, etc. The breadth of the exposition and the men who will be responsi-

ble for its success can be learned from the following committees just appointed:

Executive Committee—George Almer Newhall, Maurice Casey, J. B. Crockett, Major J. L. Rathbone, Henry J. Crocker. Committee on Horse Show Exhibit—John Parrott, J. D. Grant, Edwin F. Smith.

Committee on Cattle—H. H. Taylor, W. H. Howard, George R. Sneath.

Committee on Swine, Sheep and Goats—W. J. Martin, George Almer Newhall, Walter S. Hobart, Edwin F. Smith.

Committee on Poultry, Pigeons and Pets—Maurice Casey, George A. Pope, W. J. Martin.

Committee on Fruits, Grain, Vegetables and Flowers—E. B. Cutter, W. S. Tevis, George W. McNear, Jr., P. P. Chamberlain.

Committee on Farm and Dairy Machinery, Implements and Tools—H. H. Taylor, J. F. Boyd, E. E. Ames.

Committee on Vehicles and Carriage Materials—George A. Pope, J. A. McKerron, W. Rehberg.

Committee on Trotting Exhibits—J. F. Royd, J. C. Kirkpatrick, Major J. L. Rathbone.

Committee on General Arrangements—H. J. Crocker, Walter S. Hobart, Edwin F. Smith.

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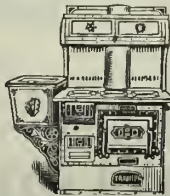
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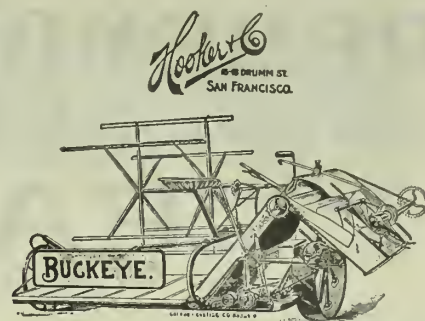
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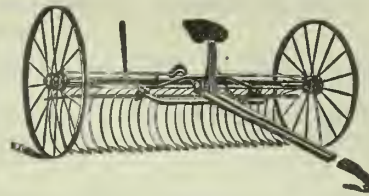
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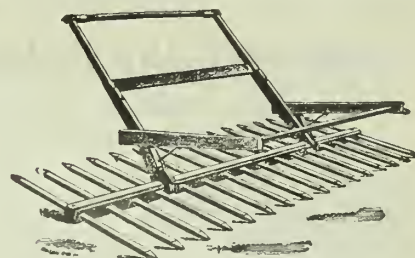
330 Market Street, San Francisco, Cal.



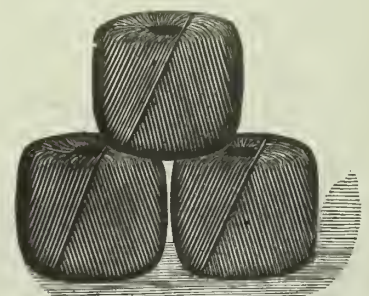
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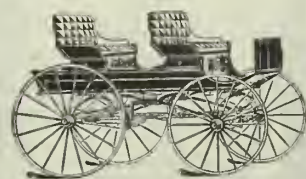
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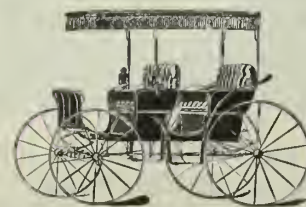
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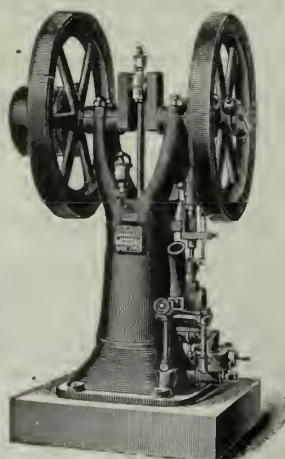
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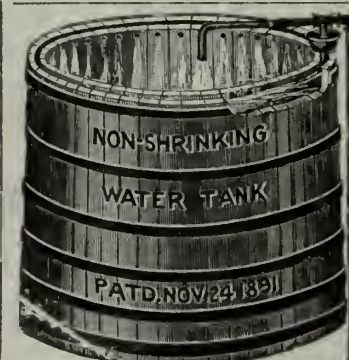
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 2.

SAN FRANCISCO, SATURDAY, JULY 14, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

### At the Pan-American.

The greatest industrial display which will be seen on this side of the world for some years will be the Pan-American Exposition which will open in Buffalo, N. Y., in the spring of next year. As the name indicates the ruling motive in the affair is the promotion of mutual feeling and interests throughout the countries of the American continents by joint participation in a grand display of the products of all honorable activities. The effort has received the full sanction of this Government, and it becomes, therefore, a national invitation from the United States to all other American States. There is every indication that the undertaking will be strikingly successful, and the preparations now rapidly advancing are upon a grand scale. The grounds cover 350 acres and the site is pronounced by landscape architects to be among the most beautiful in the world. There will be erected more than twenty large buildings and

Atlanta, Chicago, Omaha, and other general exhibitions during the last quarter of a century has brought us millions of patronage, and yet there are many millions more to be secured. It is none too soon to arrange for proper display by California at Buffalo, and the most effective work will be that which is earliest undertaken.

Some weeks ago we gave an engraving of the hor-

tical group of buildings and this week we have portrayal of several other structures. First is the Government Building. So vast is the number of valuable and interesting objects for exhibition in the possession of the United States Government that none but a building of great proportions could possibly contain them. Instead of one building, however, at the Pan-American, the Federal group will consist



massive architectural works, besides the numerous State and foreign buildings, buildings for special exhibits, public comfort and other purposes. The buildings will all be abundantly filled with the most curious and interesting exhibits, representing the latest and best achievements of the civilization of the Western Hemisphere.

We are anxious to interest our people in this Exposition because it will afford opportunity to secure wide attention to the excellence of California products and the richness of our resources. Very strong proof is available that wherever California has shown her achievements there has ensued a wider demand for our products and awakened interest in home seeking here. The work at Philadelphia, New Orleans,



A Portion of the Buildings for the Coming Pan-American Exposition.

of three massive structures connected by colonnades. The main building of this splendid architectural triad will be 130 feet wide and 600 feet long. The others will each be 150 feet square.

The agricultural industry will have a fitting setting at the Exposition. A commodious and richly proportioned building will be devoted exclusively to the interests of the farm. The building will be 150x500 feet, and contains exposition space to the amount of about 75,000 square feet.

Near to the Agricultural building will be the Stadium, or amphitheater. The Stadium will have a quarter-mile track, and a sufficiently large space inside of this for any of the athletic games. There are provided seven exits, of sufficient breadth and height to admit, in case of need, the largest vehicles or floats, as it is proposed to use the Stadium for cer-

tain pageants, exhibits of automobiles in operation, judging of live stock, horses, agricultural machinery, road machinery, etc.

Adjacent to the Agricultural Building, also, is the building devoted to Manufactures and Liberal Arts. It is one of the largest buildings of the Exposition, covering more than four acres. The western frontage is 350 feet and the northern is 500 feet. An important feature of the work is a spacious central court, 134x176 feet, containing a large room, where a fountain imparts an expression of life to the scene.

THE Prune Association apparently expects kickers. The Mercury says in its description of the fitting up of offices at San Jose: "Hitching posts will be placed in the rear of the rooms to be occupied by the association for the benefit of the growers." It is usual to place hitching posts behind the building. Possibly that is what the writer had in mind.



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E. J. WICKSON.....Horticultural Editor.

San Francisco, July 14, 1900.

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## The Week.

The midseason fruits are beginning to ripen and the rush of the year is at hand. It is becoming more clear that there is to be no excess of good fruit this year, though the aggregate crop will be large. The avenues of trade seem to be finely widening, and the cry of too much fruit—if it be of good quality—seems to have less reason than ever. Above all, do not allow prices to be depressed unduly by the report that there is too much fruit. There will not be too much, if facilities for fair selling advance as rapidly in the future as they have in the immediate past.

The markets are picking up splendidly after the holiday rest. Wheat has gone up on spot, and though shippers do not want much wheat at once they find it hard to get what they do need. Barley is rising, as the crop is seen to be less than anticipated. Lower grades of oats are selling at higher rates and choice are firm. Corn also is firm at last week's figures. Hay is firm and wheat and tame oat are higher. Everybody seems to want to buy hay, which is a sharp change from recent behavior. Bran and middlings are unchanged and offerings are considerable. Choice beef is higher. Mutton holds last week's advance and hogs are still high with light receipts, largely Eastern. Butter is firm for fancy and low grades have sold better; medium grades are, however, in too large supply and drag. Cheese is steady; recent advance seems to have checked demand somewhat, but the price is no lower.

Eggs are firm and some are asking more, but an advance is not yet established. There is fear that the great excess of hot weather eggs now in the Eastern markets may flow this way. There has been a good demand for poultry—chiefly fine chickens. Fruits are in good supply and canners are talking less for new offerings than they have paid on contract, but they are not apt to get much. Drying is too prevalent. Dried apricots are in good demand at last week's prices. New dried peaches, nectarines and pitted plums are in and they are good samples. No trading has yet been done. Choice honey is scarce. Potatoes and onions are quiet and a little lower. Dry beans are firm and the outlook is for a short crop both here and at the East. A small Eastern order for wool has been filled, and country-bought wool is being shipped. Little is doing here, but expectations are good, as foreign markets are better.

## Duty and Opportunity.

The issue between civilization and barbarism in the Orient seems now to be fairly joined. The Chinese Government cannot maintain law and order, and people of other nations who are there for legal purposes are in imminent peril of their lives. Rescuing armies representing the leading nations of the world are advancing upon Chinese soil. So far as can now be seen the purpose of this invasion is honorable. The participation in it upon the part of the United States is clearly accounted for by a declaration just issued, which includes the following:

We adhere to the policy adhered to by us in the year 1857 of peace with the Chinese nation, of furtherance of lawful commerce, and of protection of lives and property of our citizens by all means guaranteed under extraterritorial treaty rights and by the law of nations. If wrong be done to our citizens we propose to hold the responsible authors to the uttermost accountability.

The policy of the Government of the United States is to seek a solution which may bring about permanent safety and peace to China, preserve territorial and administrative entity, protect all rights guaranteed to friendly powers by treaty and international law and safeguard for the world the principle of equal and impartial trade with all parts of the Chinese empire.

Such is the broad purpose of this country and the people of this coast share therein. There will arise on this coast, as the nearest approach of the Occident to the Orient, an opportunity to participate in the struggle which may be protracted and severe, more fully than do other parts of the country. It looks as though this coast might be called upon to the fullest extent of her ability in supplying the sustenance and supplies which the armies of the nations will require. This is a humane demand and it must be fully met. Already the contingency is attracting the attention of the local representatives of foreign governments. The Chronicle gives an insight into the interest already manifested:

Repeated inquiry from prospective purchasers in regard to the purchase of several hundred head of horses, and also in regard to transportation across the Pacific, has given rise to rumors that these inquiries originate with people representing the Government of Germany. It is now generally accepted among business men and shippers here that should the war in China continue, or assume serious proportions, San Francisco would become an important shipping point for supplies for the seat of war. The resident consuls of the nations interested in the Chinese imbroglio were seen last evening in reference to the possible purchase in this city of supplies for their respective armies in China. While no orders had been received by any of them, all admitted that it would be most likely for them to receive orders from their home governments to buy large quantities of food-stuffs, horses, tents, equipments and other supplies to be shipped to China. A consul, representing one of the great powers of Europe, said: "California has become known as a great source of supply the world over of late, and more especially so since the beginning of the war in the Philippines, and the powers now hurrying their arms toward the Orient will look to San Francisco for their principal supplies. We must be prepared to carry out the orders when they come to us, and it is proper to keep posted on quantities, prices and facilities for transportation. That, I believe, is all that has been done thus far by the consuls at this port."

It certainly seems likely that all this will be realized and that every effort should be made to bring the Pacific States to the fullness of their production during the coming year. Fortunately the harvest now being gathered is large in most producing regions and the surplus of staple food supplies in all except animal products which will be immediately available is large enough to provision the opening of a campaign. How long the trouble may last none can tell, but it may not be easily settled. It will take months for the nations to reach the scenes of war and the restoration of quiet in such a large and turbulent people may occupy years. There will be then occasion for increase in the coming year's products of food supplies and preparation should be made for it. It will be a profitable as well as a humane effort, and an effort which will leave the Pacific coast at a point higher in development and progress than it has ever attained before. Already the activity in the Philippines has brought us new industrial life and population, and the greater issues in China will naturally do more in the same direction.

A special participation by Providence in the greatest enlightening movement of the present day would

be the arrangement to provide California with a good old-fashioned rainfall over her whole acreage during the crop year which is just beginning. Our people have earned it by patience and by most notable self-help in the development of water supplies during the last three years. Now let us have a year of abundant rainfall and wonderful production to meet the new demands that will ensue.

Why will Californians ship scaly fruit? Pears shipped from San Francisco are being burned at Vancouver because affected with San Jose scale. This happened twice within a week. There cannot be any profit in that business.

## QUERIES AND REPLIES.

### Is Black Heart Due to Intermittent Moisture?

TO THE EDITOR:—A large percentage of trees grown in Nebraska are what is commonly called "black-hearted." Having pruned thousands personally, I speak from experience. Can irrigation be depended upon to prevent this injury? I have come to the conclusion that dry spells are the principal cause of "black heart." Am I right? Again, it is urged by some that irrigation should not be practiced after certain fixed dates, say August 15th, because the growth will thus be prolonged so that frost will kill the trees. Is this true scientifically? Our experience has brought us to this conclusion: The growth that is made too late in the fall is the result of lack of moisture some time previously, followed by sufficient moisture later, and, after receiving the moisture that was not furnished when needed, nature makes an effort to "catch up," as it were, and is sometimes a little late in doing it. Will a tree mature in a given time, so that it becomes ready for winter, if it gets plenty of moisture at all times during the growing season? This is a very important question to many people under canals in Western States.—ORCHARDIST, Central Nebraska.

We hesitate about writing concerning appearances under conditions which are so strange to us as those in Nebraska. We have an occurrence here chiefly with the apricot which seems to be something like what you call "black heart." It has never been explained, and we should not feel safe in attributing it to moisture conditions without careful investigation, and yet this disease occurs chiefly where rainfall is short and irrigation of deciduous fruits very irregular.

It is a fact that allowing trees to become dry and dormant in the summer induces them to start unseasonably in the fall and to produce immature wood at a time when the tree should be preparing to resist low temperature. It is also true that a tree adequately supplied with moisture all through the growing season will continue its growth and mature its wood properly. And yet where the autumn is warm, and violent drops of temperature occasionally occur, there is great danger in keeping trees active too late. The chief regions of California escape this danger by having a very even and gradually decreasing temperature as winter approaches.

There is another condition prevailing in the interior Northwest which shows that trees should have adequate moisture in the fall in order to prepare them to resist the excessive evaporation due to an exceedingly dry winter atmosphere, and there are experiments showing that trees properly irrigated in the fall have resisted winter killing when those allowed to go into the winter without irrigation have been destroyed. In this case there are such cool autumns that trees become dormant naturally, and moisture does not induce activity, consequently it can be safely applied.

### Joint Worm in Wheat.

TO THE EDITOR:—I find on examination that there is a worm in the joints of the wheat, which has caused quite a shrinkage on summer-fallow wheat. I send you samples of joints that will have them in. Please investigate and report.—WHEAT GROWER, Biggs.

This is not the common "joint worm" which accomplishes quite an enlargement and bending of the joint, but is a closely allied species which gives to the casual observer no intimation of its presence. Its work is, however, shown in the shrunken kernels or empty heads. By carefully opening the joints an almost transparent, footless grub is seen, not above  $\frac{1}{2}$  inch in length, and it takes good eyes to see it without a magnifier. There is no remedy for this insect after it has reached the grain. The parent fly



is very minute and the egg microscopic. Any treatment to avert the fly or kill the egg would cost more than the wheat is worth. This insect is, however, largely kept in subjection in this State by the common practice of burning the straw and stubble, and the same is true of the Hessian fly and other small pests of the wheat plant.

#### Lemons and Pomeles.

TO THE EDITOR:—Is the Lisbon lemon a good bearer or shall I graft over Lisbons to Eurekas on my place in San Bernardino county? I have Villa Francas doing well, but for another variety I am not sure whether to hold my Lisbons and wait for them to bear or change them to Eurekas. I have fifty pomeles, but I do not feel satisfied with them. I have had them budded to Marsh Seedless. Is that the best?—READER, Connecticut.

The Lisbon lemon is reported by most growers a good bearer, but it does not come into bearing as early as some other varieties. In fact, some growers claim that it has to be in the orchard from seven to ten years before it bears well. The Eureka is not as popular in the interior as formerly, because it is apt to have branches scant of foliage, which is more objectionable in the hot valleys than near the coast, where it is the leading variety. We should retain the Lisbon, providing they are still young and have not reached the age at which the tree bears heavily. You do not state the age of the trees.

The pomelo is not in good standing in this State and a very large part of the trees planted a few years ago have already been grafted over to the Navel orange. The preference seems to be for a pomelo which has seeds and quite characteristic amount of acid and bitterness. The Florida Seedlings seem to have most nearly met these characteristics, but at present few pomeles are being planted and most of the roots already growing are being used for other citrus fruits.

#### Entertaining a Devil Unawares.

TO THE EDITOR:—I send you a sample of grass. It is a strong, thrifty grower, as the sample will indicate, has a tendency to keep the ground loose and crowds out everything in sight, including the gophers. Kindly inform me what it is. Has it any value as a feed for dairy cows when pastured green? If so, how does it compare with alfalfa, and what other feeds, if any, would be necessary with it in order to obtain a balanced ration?—L. G. CLARK, St. Helena.

Mr. Clark sends us a fine specimen of Johnson grass. In a place which suits it it will crowd out everything, including the owner, for some lands infested with it in the interior are practically unsaleable, or at least are so reported, except to tenderfeet. If it gets a hold in the choice vineyard lands of St. Helena it will vie with the phylloxera in destroying their value. Usually on dry waste land it will not grow; it takes the best and will not let go. As a feed Johnson grass is coarse and in chemical composition rather poor as compared with other pasture grasses. For a balance it will work well with alfalfa, for it is short in protein where alfalfa is long. But we would not think of doing much with Johnson grass. Land which it likes will grow many things which are better—if it gets a chance.

#### Ladybirds and Bean Aphis.

TO THE EDITOR:—I send you a specimen of bug, which seems to be very disastrous for the bean crop of Ventura county; it cannot be destroyed. The bug seems to me to belong to the same species as the Colorado potato bug. I hope that you will investigate this matter, and in case that I am right to give a remedy.—READER, El Rio.

The insects which you send belong to the group of beetles known as ladybirds, and they are beneficial to plants from the fact that they live upon aphis, or plant lice. We do not see how they can be injurious to the bean crop, and should count their presence an advantage in cleaning the plants of smaller insects which might infest them. We find, in fact, on close examination that this is the case, for there are on the leaves you send many remains of black plant lice which have been destroyed by these ladybirds.

#### Not for Potatoes.

TO THE EDITOR:—We have seventy-five acres now vacant, and would like to set them out to something that requires no irrigation and not very much attention. We want to get enough out of it to plant a vineyard next year. The land is level, but is exhausted for grain. Can you advise us? We thought

potatoes might be good.—LAND OWNER, Los Angeles.

Using the land you mention, it does not seem likely that you could secure any satisfactory results with potatoes this year—unless you can thoroughly moisten the ground by irrigation before planting. Potatoes need moist, rich soil to produce satisfactorily. If there is lack of moisture, there will not be any satisfactory size or quality in the tuber. They also require very careful attention to prevent loss of moisture by evaporation and to maintain the soil in a good mellow condition underneath. The only thing that occurs to us as likely to yield something so late as this on land which must be quite dry, is kafir corn; but this would not be profitable to grow unless you have stock, to which it could be fed to advantage. Considering the lateness and the dry season, we doubt if any profitable use can be made of the land this year, and would advise deep plowing, as soon as it is possible, to prepare the land for planting of a vineyard next year.

#### Paris Green for Ground Pests.

TO THE EDITOR:—Will you kindly give me formula for Paris green water to be used around roots of rose bushes and fruit trees to destroy "fishing worms" and slugs or grubs, the large white ones that are found in old manure? Lime water is useful, but not as good as the Paris green.—READER, Long Beach.

We have never heard of using Paris green water around the roots of plants to destroy worms and slugs, and yet it may be effective for that purpose. We know of no experiments to determine what strength of Paris green can be safely used in application to the root. If you should take lime water and add Paris green to the amount of one ounce to ten gallons of water, and stir it thoroughly so as to keep the Paris green suspended and make an even distribution, it would be safe. The lime will reduce the corrosive effect of any free arsenic there may be in the Paris green, if there should be any. If you succeed along this line we should like to know it.

#### Injury by Spraying.

TO THE EDITOR:—About a month ago I sprayed some French prune and a few plum trees with kerosene emulsion (Prof. Cook's formula), as given in your book, "California Fruits." The object was to kill the aphis under the leaves. The spraying was very effective, killing all the aphis, but the leaves turned brown on the plum trees and the prune trees got brown spots, especially along the center of the leaves. What could have caused this? Please give me a remedy for the white worm or maggot that is in the currants and gooseberries.—PHILIP H. SCHAFER, Ross Station.

The oil may not have been completely emulsified. It is very necessary that sufficient sharp agitation should be given to secure the emulsion, otherwise injury to leaves will ensue. There is sometimes a partial browning of the leaves due to the injury to the leaf cells by the aphis, but this usually has a mottled appearance. We do not know a satisfactory treatment for the gooseberry fruit worm. It has been known in the counties north of the bay for some years. Has any one succeeded with it?

#### Sorghum for Hogs.

TO THE EDITOR:—I have some Early Amber sorghum (broadcast) under irrigation. I want to turn some pigs in it to pasture it off. Will this kill them, as some people claim? And how about the second and third crops? Which is better, to feed it while it is about 1 or 2 feet high, or when it is in seed?—SUBSCRIBER, Toluca, Los Angeles county.

We never heard of injury to hogs from green sorghum and we should not apprehend any. In an account of danger in sorghum, in the PACIFIC RURAL PRESS of June 16, you will see that cattle are injured by rank sorghum, whether it be first or later growth. It seems to depend upon the condition of the material, not the order of its growth. To get the greatest benefit from the plant it must not be fed too young. Some suggestions on this point are given in an article on kafir corn on another page of this issue.

#### Who Knows About These Pears?

TO THE EDITOR:—Mr. Simpson of Sheffield, Eng., author of "The New Forestry," who is about to publish a book on fruit trees, desires information regarding a wonderful pear tree that was planted by a Mr. Kercheval somewhere in the Sacramento valley. About 1876 a photograph was taken of one branch that contained 203 pears and weighed eighty-three pounds. Now, he would like to know the age of the

tree at that time, the variety, also whether grafted on some stock other than its own, what stock, or is it in its own roots? He further asks me if I can get him similar information of extraordinary fruit productions of California. He would esteem it greatly and he would notice it in his new book.—WM. LETTS OLIVER, San Francisco.

We do not remember the particular case mentioned, though we have many records of large pears and large clusters of pears. Perhaps some reader can give the facts in this instance. The Kerchevals are prominent fruit growers on the Sacramento river. Mr. Simpson ought to be supplied with many facts about extraordinary fruit productions in California, for they are abundant. The only question is: How much will he believe?

## WEATHER AND CROPS.

### Report of the U. S. Weather Service for Week Ending July 9, 1900.

ALEXANDER MCADIE, Forecast Official and Station Director.

#### COAST AND BAY SECTIONS.

Warm days and cool nights, with light fogs, have been favorable for crops. Harvesting and thrashing continue. Many places report that the yield of wheat is proving better than had been estimated, and the quality is excellent. Barley is of good quality, but the yield is below average in most places. White oats are being injured by rust in Humboldt county. Corn, potatoes, beets and other vegetables are making good growth. Hops are improving, but the yield will be light. Grapes are looking well, and a full crop is expected. Prunes are said to be dropping badly in some orchards, but an average crop will probably be gathered. Peaches are in good condition, and will yield a heavy crop.

#### SACRAMENTO VALLEY.

Warm, dry weather during the week has been favorable for all crops. Wheat harvest has progressed rapidly in all sections. The yield of wheat in portions of Yolo, Yuba and Butte counties is reported to be less than average; the light yield and small acreage in the vicinity of Wheatland will make this the lightest crop for several years. Other places report a good average crop and the quality is excellent in all sections. Hay harvest is completed; a good crop has been gathered. Hops are improving rapidly, and prospects are now good for an excellent crop. Grapes are looking well, and give promise of a large crop. Pear, peach and prune trees are heavily laden with fine fruit, which is being gathered and shipped.

#### SAN JOAQUIN VALLEY.

Clear, warm weather continued during the past week, and was favorable for the rapid maturing of all growing crops. Grain harvesting is progressing rapidly, and over half of the grain crop has been cut. In some parts of the northern portion of the valley the grain yield will not be up to early estimates, but elsewhere reports are favorable for large crops. Apricot drying is nearly completed. Tragedy prunes and Bartlett pears are being marketed. Peaches, plums, prunes and pears are progressing nicely and good crops are anticipated. Some lemons are being marketed from the vicinity of Porterville. Watermelons are maturing rapidly. Olives set for a fine crop. Some irrigation is being done, but the water supply is getting low. Vines are thrifty, but grapes will probably be below the average.

#### SOUTHERN CALIFORNIA.

Normal temperatures and favorable crop conditions have prevailed during the week. Oranges have set well, and give promise of a large crop. Lemons are being shipped in large quantities. Berries are plentiful, and melons are coming to market. The peach crop is very light and the quality poor. Apricots are not yielding as well as expected. Walnuts continue in good condition. Beans on irrigated lands are doing well. Pasturage is good in some localities. Irrigating water is getting low.

EUREKA SUMMARY.—The potato blight is spreading, and farmers are spraying with sulphate of copper and lime. Oat hay is yielding below average. Fruit is doing well; no injury by codlin moth is reported.

LOS ANGELES SUMMARY.—Continued foggy mornings were beneficial to corn, beans and beets. Crops continue to look well, notwithstanding shortage of irrigation water. Oranges are unusually forward, and promise a large early crop. Fruit drying is at its height; light crop.

#### Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, July 11, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Minimum Temperature for the Week.....	Maximum Temperature for the Week.....
Eureka.....	.00	T	.00	.04	50	64
Red Bluff.....	.00	.00	.00	.01	64	104
San Francisco.....	.00	.00	.00	.01	54	100
San Francisco.....	.00	.00	.00	.01	48	70
Fresno.....	.00	.00	.00	T	66	108
Independence.....	.00	.00	.00	T	62	98
San Luis Obispo.....	.00	T	.00	T	48	86
Los Angeles.....	.00	.00	.00	.01	60	86
San Diego.....	.00	.00	.00	T	60	70
Yuma.....	.00	.00	.00	.07	62	108



## THE STOCK YARD.

### The Construction of a Round Silo.

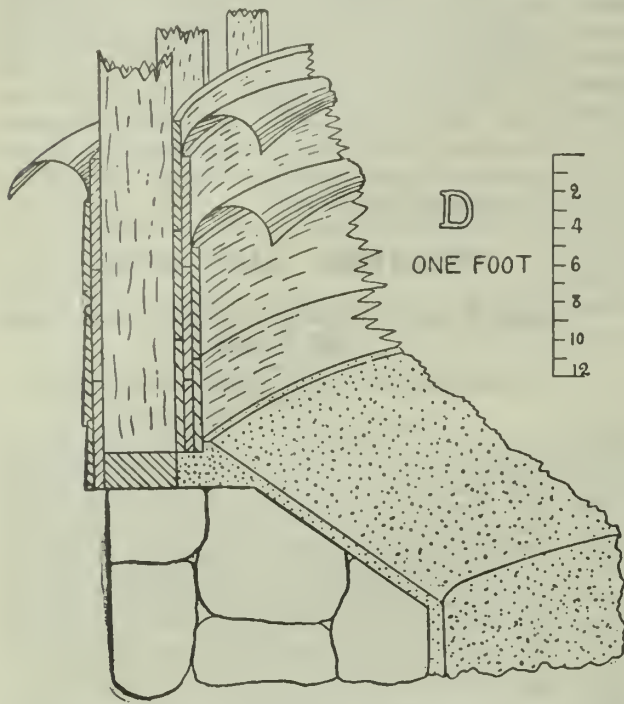
The construction of silos is one of the most interesting questions in dairy management in California at the present time. Experience with silage has been

information about construction very pertinent.

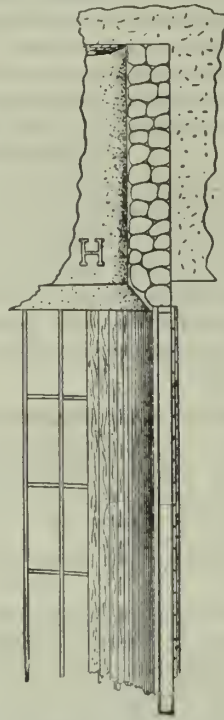
The Wisconsin Experiment Station has led the country in silage investigations, and has seen the results of its work in multiplication of silos until they are almost as common as corner-ribs. Prof. F. H. King, whom we have often mentioned for his accurate work, largely on the mechanical side of the silo subject, has just published a new bulletin on "Silage

Prof. King's bulletin, there will be found more elaborate foundations than are required in our climate, for we have no frost which gets under things. So far as resisting gravity and giving solidity to the structure and to preserve the superstructure from decay, his specifications will, however, be found pertinent and trustworthy.

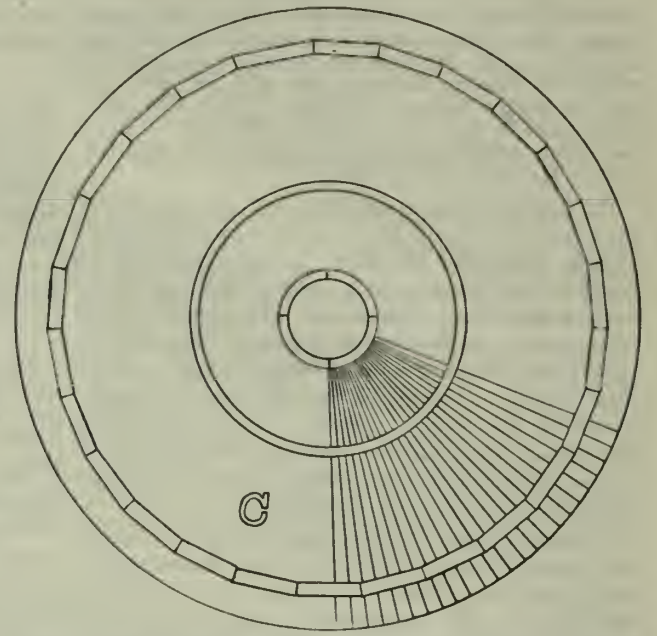
Prof. King describes stone silos, and brick silos and



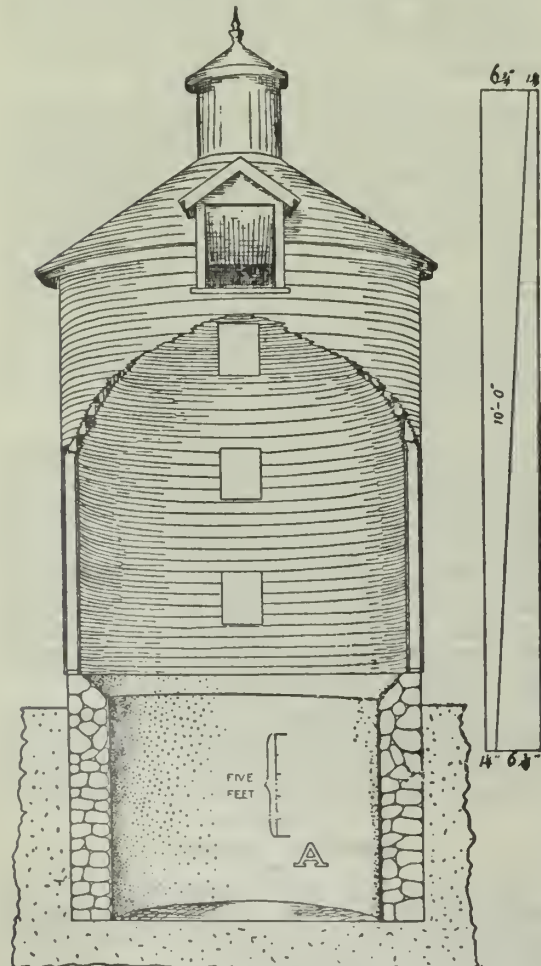
Method of constructing the all-wood round silo and connecting it with the wall flush with the outside. This figure shows the most substantial form of construction with three layers of 3-inch lumber and two layers of three-ply acid and water-proof P. & B. paper between them. A very excellent silo is made after this plan, omitting the inner layer of lining and paper and the layer of paper on the outside. With small silos 15 feet in diameter only the siding on the outside is necessary for strength and protection against weather.



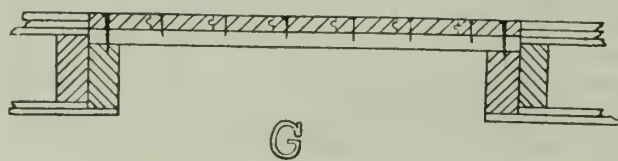
Construction of the all-wood round silo where the lining is made of ordinary 4-inch flooring running up and down, and nailed to girts cut in between the studding every 4 feet.



Construction of conical roof of round silo where rafters are not used. The outer circle is the lower edge of the roof, the second circle is the plate, the third and fourth circles are hoops to which the roof boards are nailed. The view is a plan looking up from the under side.



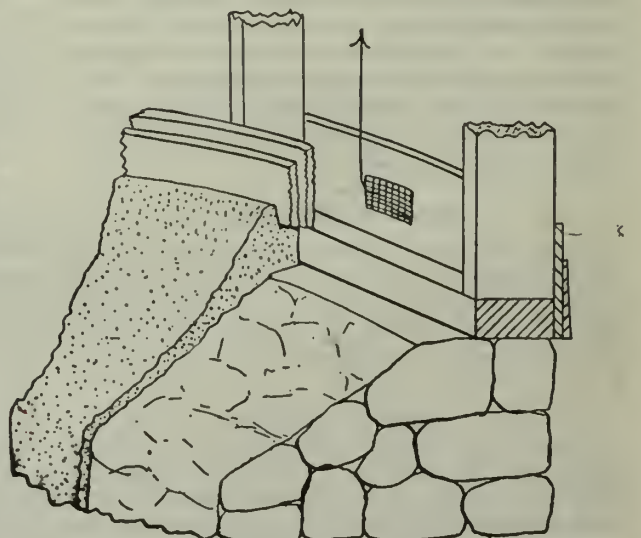
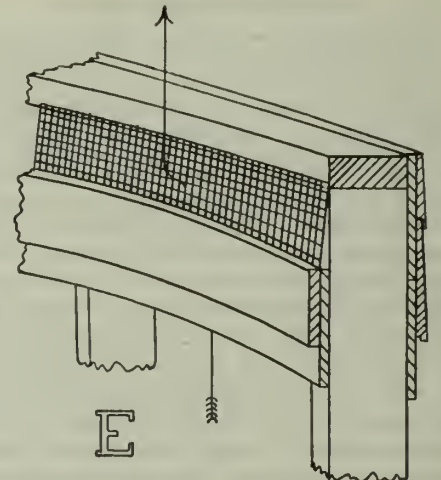
An all-wood round silo on stone foundation. H represents a method of sawing boards for the conical roof.



H



The construction of the door for the all-wood silo. G is a cross section of the door resting against the door jamb, which is provided with a gasket of three-ply rubberoid roofing and held in place with four lag bolts and washers, the door opening on the inside. F is a front view of the door made of two layers of 4-inch or 6-inch tongued and grooved flooring with a layer of three-ply acid and water-proof P. & B. paper between.



Construction for ventilating the spaces between the studding in all-wood and lathed and plastered silos. The lower portion shows the intakes of fresh air from the outside at the bottom, and the upper portion shows where the air enters the silo at the plate to pass out at the ventilator in the roof.

in the main very clearly in favor of this method of storing large quantities of succulent food for future use, though some are led to question the desirability of the silo for this State. So far as we know the silo has proved most profitable where silo crops can be grown in largest amount at least cost, and those who have done most along silage lines are surest that these lines pay. The agitation of the subject makes

and the Construction of Modern Silos," which goes very fully into its subject, and we have thought it would be helpful to have some of Prof. King's suggestions, although we have a much more favorable climate than that for which he writes, and do not need some of the safeguards which he insists upon to withstand freezing, etc. In the construction of the board silo, of which we shall take illustrations from

lath and plaster silos, but it strikes us that the all-wood silos are most likely to prevail in this State. He says that up to the present time more silos have been built of wood than of any other material, and these silos are almost wholly of circular form. We shall proceed then with Prof. King's description of one style of all-wood, round silos:

THE FOUNDATION.—There should be a good, sub-



stantial masonry foundation for all forms of wood silos, and the woodwork should everywhere be at least 12 inches above the earth to prevent decay from dampness. For a silo 30 feet deep the foundation wall of stone should be 1.5 to 2 feet thick. [In the engraving the silo is shown with a cellar forming part of it. This is desirable when basement cow barns are used, and the bottom of the side is therefore level with the floor of the basement stable. This feature would be omitted in most California silos, for we do not need warm basements to keep cows warm.—Eds.]

**BOTTOM OF THE SILO.**—After the silo has been completed the ground forming the bottom should be thoroughly tamped so as to be solid, and then covered with 2 or 3 inches of good concrete made of 1 of cement to 3 or 4 of sand and gravel. The amount of silage which will spoil on a hard clay floor will not be large, but enough to pay a good interest on the money invested in the cement floor. If the bottom of the silo is in dry sand or gravel the cement bottom is imperative to shut out the soil air.

**FORMING THE SILL.**—The sill in the all-wood silo may be made of a single 2x4 cut in 2-foot lengths, with the ends beveled so they may be toe-nailed together and bedded in cement upon the top of the foundation wall, in the manner represented in Fig. 8 and described under the brick lined silo.

**SETTING THE STUDDING.**—The studding of the all-wood round silo need not be larger than 2x4 unless the diameter is to exceed 30 feet, but they should be set as close together as 1 foot from center to center. This number of studs is not required for strength, but they are needed in order to bring the two layers of lining very close together so as to press the paper closely and prevent air from entering where the paper laps.

Where studding longer than 20 feet are needed short lengths may be lapped 1 foot and simply spiked together before they are set in place on the wall. This will be cheaper than to pay the higher price for long lengths. All studding should be given the exact length desired before putting them in place.

To stay the studding a post should be set in the ground in the center of the silo long enough to reach about 5 feet above the sill, and to this stays may be nailed to hold in place the alternate studs until the lower 5 feet of outside sheeting has been put on. The studs should be set first at the angles formed in the sill and carefully stayed and plumbed on the side toward the center. When a number of these have been set they should be tied together by bending a strip of ½-inch sheeting around the outside as high up as a man can reach, taking care to plumb each stud on the side before nailing. When the alternate studs have been set in this way the balance may be placed and toe-nailed to the sill and stayed to the rib, first plumbing them sideways and toward the center.

**SETTING STUDDING FOR DOORS.**—On the side of the silo where the doors are to be placed the studding should be set double and the distance apart to give the desired width. A stud should be set between the two door studs as though no door were to be there, and the doors cut out at the places desired afterwards. The construction of the door is represented in the engraving.

**SILO SHEETING AND SIDING.**—The character of the siding and sheeting will vary considerably, according to conditions and size of the silo. Where the diameter of the silo is less than 18 feet inside, and not much attention need be paid to frost, a single layer of beveled siding, rabbeted on the inside of the thick edge deep enough to receive the thin edge of the board below, will be all that is absolutely necessary on the outside for strength and protection against weather. This statement is made on the supposition that the lining is made of two layers of fencing split in two, the three layers constituting the hoops. If the silo is larger than 18 feet inside diameter, there should be a layer of ½-inch sheeting outside, under the siding.

In applying the sheeting begin at the bottom, carrying the work upward until staging is needed, following this at once with the siding. Two 8-penny nails should be used in each board in every stud, and to prevent the walls from getting "out of round" the succeeding courses of boards should begin on the next stud, thus making the ends of the boards break joints.

When the stagings are put up new stays should be tacked to the studs above, taking care to plumb each one from side to side. The siding itself will bring them into place and keep them plumb the other way if care is taken to start new courses as described above.

**FORMING THE PLATE.**—When the last staging is up the plate should be formed by spiking 2x4s, cut in 2-foot lengths, in the manner of the sill, and as represented in the engraving showing roof construction, down upon the tops of the studs, using two courses, making the second break joints with the first.

**THE LINING OF THE WOOD SILO.**—There are several ways of making a good lining for the all-wood round silo, but whichever method is adopted it must be kept in mind that there are two very important ends to be secured with a certainty. These are (1) a lining which shall be and remain strictly airtight and (2) a lining which will be reasonably permanent.

**ALL-WOOD LINING OF FOUR-INCH FLOORING.**—If one

is willing to permit a loss of 10% to 12% of the silage by heating, then a lining of tongued and grooved ordinary 4-inch white-pine flooring may be made in the manner represented in the engraving, where the flooring runs up and down. When this lumber is put on in the seasoned condition a single layer would make tighter walls than can be secured with the stave silo where the staves are neither beveled nor tongued and grooved.

In the silos smaller than 18 feet inside diameter the two layers of boards outside will give the needed strength, but when the silo is larger than this and deep there would be needed a layer of the split fencing on the inside for strength; and if in addition to this there is added a layer of 3-ply P. and B. paper a lining of very superior quality would be thus secured.

**LINING OF HALF-INCH BOARDS AND PAPER.**—Where paper is used to make the joints between boards airtight, as represented in another engraving, it is extremely important that a quality which will not decay and which is both acid and waterproof be used. A paper which is not acid and waterproof will disintegrate at the joints in a very short time and thus leave the lining very defective.

The best paper for silo purposes with which we are acquainted is the 3-ply P. and B. brand. It is thick, strong, and acid and waterproof.

A silo lining with two thicknesses of good fencing having only small knots, and these thoroughly sound and not black, will make an excellent lining.

Great care should be taken to have the two layers of boards break joints at their centers, and the paper should lap not less than 8 to 12 inches.

The great danger with this type of lining will be that the boards may not press the two layers of paper together close enough so but that some air may rise between the two sheets where they overlap and thus gain access to the silage. It would be an excellent precaution to take to tack down closely with small carpet tacks the edges of the paper where they overlap, and if this is done a lap of 2 inches will be sufficient.

The first layer of lining should be put on with 8-penny nails, two in each board and stud, and the second or inner layer with 10-penny nails, the fundamental object being to draw the two layers of boards as closely together as possible.

Such a lining as this will be very durable because the paper will keep all the lumber dry except the inner layer of half-inch boards, and this be kept wet by the paper and silage until empty and then the small thickness of wood will dry too quickly to permit rotting to set in.

A still more substantial lining of the same type may be secured by using two layers of paper between three layers of boards, as represented in the engraving, and if the climate is not extremely severe, or if the silo is only to feed from in the summer, it would be better to do away with the layer of sheeting and paper outside, putting it on the inside, thus securing two layers of paper and three layers boards for the lining with the equivalent of only 2 inches of lumber.

**THE SILO ROOF.**—The roof of cylindrical silos may be made in several ways, but the simplest type of construction and the one requiring the least amount of material is that represented in the engravings, and which is the cone.

If the silo is not larger than 15 feet inside diameter no rafters need be used, and only a single circle like that in the center of the engraving of the roof. This is made of 2-inch stuff cut in sections in the form of a circle and two layers spiked together, breaking joints.

The roof boards are put on by nailing them to the inner circle and to the plate, as shown in the drawing, the boards having been sawed diagonally as represented, H, making the wide and narrow ends the same relative widths as the circumferences of the outer edge of the roof and of the inner circle.

If the silo has an inside diameter exceeding 15 feet it will be necessary to use two or three hoops according to diameter. When the diameter is greater than 25 feet it will usually be best to use rafters and headers cut in for circles 4 feet apart to nail the roof boards to.

The conical roof may be covered with ordinary shingle, splitting those wider than 8 inches. By laying the butts of the shingle ½ to ¾ of an inch apart it is not necessary to taper any of the shingles except a few courses near the peak of the roof.

In laying the shingle to a true circle and with the exposure to the weather a good method is to use a strip of wood as a radius which works on a center set at the peak of the roof and provided with a nail or pencil to make a mark on the shingle where the butts of the next course are to come. The radius may be bored with a series of holes the right distant apart to slip over the center pivot, or the nail may be drawn and reset as desired. Some carpenters file a notch in the shingling hatchet and use this to bring the shingle to place.

**VENTILATION OF THE SILO.**—Every silo which has a roof should be provided with ample ventilation to keep the under side of the roof dry, and in the case of wood silos, to prevent the walls and lining from rotting. One of the most serious mistakes in the early construction of wood silos was the making of the walls with dead-air spaces which, on account of the damp-

ness from the silage, lead to rapid "dry rot" of the lining.

In the wood silo and in the brick lined silo it is important to provide ample ventilation for the spaces between the studs, as well as for the roof and the inside of the silo, and a good method of doing this is represented in the engraving where the lower portion represents the sill and the upper the plate of the silo. Between each pair of studs where needed a 1½-inch auger hole to admit air is bored through the siding and sheeting and covered with a piece of wire netting to keep out mice and rats. At the top of the silo on the inside the lining is only covered to within 2 inches of the plate and this space is covered with wire netting to prevent silage from being thrown over when filling. This arrangement permits dry air from outside to enter at the bottom between each pair of studs and to pass up and into the silo, thus keeping the lining and studding dry and at the same time drying the under side of the roof and the inside of the lining as fast as exposed. In those cases where the sill is made of 2x4's cut in 2-foot lengths there will be space enough left between the curved edge of the siding and sheeting and the sill for air to enter so that no holes need be bored as described above and represented in the engraving. The openings at the plate should always be provided and the silo should have some sort of ventilator in the roof. This ventilator may take the form of a cupola to serve for an ornament as well, or it may be a simple galvanized iron pipe 12 to 24 inches in diameter, rising a foot or two through the peak of the roof.

It is impossible to so paint a wood lining that it will not become wholly or partly saturated with the silage juices. This being true, when the lining is again exposed when feeding the silage out, the paint greatly retards the drying of the wood work and the result is decay sets in, favored by the prolonged dampness. For this reason it is best to leave a wood lining naked or to use some antiseptic which does not form a water-proof coat.

**COST OF THE ALL-WOOD ROUND SILO.**—The cost of this type of silo will vary with the thoroughness of the manner of making the lining and of protection against frost. At the present prices for materials, the walls will cost about 12.75 cents per square foot of outside surface when the lining is two layers of half-inch split fencing with a layer of 3-ply Giant P. and B. paper between, and with one layer of split fencing outside, covered with rabbetted house siding.

If one is not particular about the appearance of the building and is willing to do without a roof or to cover the silo with straw, wild hay, or some similar makeshift, it is possible to build much more cheaply. With studding, \$18; fencing, \$26, split into ¾-inch lumber, and 3-ply acid and water-proof paper, \$7 per thousand, the materials for a silo 15 feet inside diameter and 20 feet deep would cost about \$35, not including 4 feet of foundation wall. Including the wall the whole may be built for between \$50 and \$60 and thoroughly good silage be made in it.

## HORTICULTURE.

### What Will Do on Satsuma?

TO THE EDITOR:—If your correspondent, E. Eaden Cook, a near neighbor of mine, had climbed over his fence he could have seen the following varieties successfully grafted on Satsuma: Grand Duke, California Red, River's Early, River's Late Red, Peach, Early Prolific, Normand, Bailey, Chabot, Autumn Compote, Wyedale, Archduke, Lafayette, Victoria—there are more, but I name these as representative plums. As to the Robe de Sergeant, I have 500 trees budded on eight-year-old Kelseys which are all right, and I see no reason why they should not do equally well on Satsuma. The above varieties are all in bearing.

By the way, with due respect to "Climax" and all other "better than the best," I still think Wickson the best Japanese plum, all things considered, and no doubt the editor of the PACIFIC RURAL PRESS will straightway swell with grateful pride.

Napa.

LEONARD COATES.

We are thankful for this note. If all readers would give the results of their experience as promptly and pointedly as Mr. Coates, how much we would all know.

### Eastern Fruit Shipments.

"Aside from those directly interested in the industry, comparatively few people have a remote idea of the importance of the fruit raising industry of California," said Master of Transportation Richardson of the Southern Pacific Company to a Call reporter, referring to the present movement of deciduous fruits to the Eastern markets.

"The figures are certainly stupendous and run into sums hardly comprehensible," continued the gentleman. "The June shipments averaged sixty carloads a day, which accounts for 1800 carloads in the month. This means nearly 47,000,000 pounds of the early deciduous fruits, such as apricots, plums and peaches. Then comes the rush of the midsummer products, which increases the exportation to seventy carloads per day, and this movement lasts during



July and August. This means 4200 more carloads. Then the September shipments drop back to about sixty carloads per day.

"This," said Mr. Richardson, "runs up into a great total, and amounts approximately to about 7800 carloads. The falling off in the latter part of the season is accounted for by the fact that the Eastern fruits come into the markets and reduce the demand for the products of the Golden State."

Taking Mr. Richardson's figures of carload exports the total number of pounds of California's luscious fruits sent to tickle the palates of people beyond the Rockies amounts to 202,000,000. These 7800 carloads, in plain, cold figures, do not appear to amount to an astonishing total, but when it is understood that they represent a solid train of cars each carrying 26,000 pounds and extending 59 miles, a reasonably intelligent idea of the importance of the horticultural industry of California can be formed.

These exports should not be confounded with those of that part of the State south of Tehachapi, from whence are shipped thousands of carloads of citrus fruits. The railroad statistics show that there is practically no demand for the deciduous fruits of this State in the Southern States, the movement of horticultural products eastward through Sacramento being fully 99% of the total.

Gen. Chipman's report as president of the State Board of Trade gives the fresh deciduous fruit shipments for 1899 as 9352 carloads of ten tons each. Mr. Richardson gives 7800 carloads of thirteen tons each as probable for this year. This shows about 750 cars gain this year.

## FRUIT MARKETING.

### Progress of Movement for Cured Fruit Marketing.

Written for the PACIFIC RURAL PRESS.

Profiting by the more or less successful experiences of the many co-operative organizations preceding it, the California Cured Fruit Association begins its work under the most favorable conditions. It starts out with the control of an adequate per cent of the crop to secure success, which per cent is steadily increasing.

The directors are men of unquestioned character and integrity. In the preliminary work no dissensions have arisen to weaken their forces. The commercial packers working in conjunction have perfected a kindred organization, which is co-operative and non-competitive in its purpose, and materially strengthens the Association. And, finally, public opinion and the press are unanimous in support of the movement. With all these conditions and forces on its side it needs only the unwavering support of the grower, the man most materially interested in it, to insure its complete success.

**THE PACKERS' COMPANY.**—The organization of the California Fruit Packers' Company to work in conjunction with the Association, is in imitation of a similar movement at Fresno growing out of an endeavor to harmonize the differences that existed between the raisin growers and packers of that section. Entire harmony has existed from the beginning between the prune growers and packers, and the organization of the Packers' Company was merely an endeavor to strengthen the co-operative movement. In the company are included, alike and on the same basis, the co-operative unions and the competitive packers. The manager selected, R. W. Hersey, is a young man of fine executive ability and an active organizer. His entire experience in the fruit business has been in connection with co-operative concerns, which is of itself a guarantee that the rights and interests of the grower will be well guarded. The president, W. M. Griffin, has always enjoyed the confidence of the grower. From the first every action of the packers has shown good faith on their part and left the grower no room for suspicion.

The packers' plan of action is entirely untried. In theory it is admirable. How it will work out in practice time will only show. The Packers' Company deals with the individual packer and the Association. The Association deals with the individual grower and the Packers' Company. It greatly simplifies the machinery and controls the action of the individual packer, which the old plan of each packer dealing directly with the Association did not. So far as known the plan originated in California and is being worked out for the first time. The men who are working it out have had a lifelong experience in the fruit business and can be relied upon to make few mistakes.

**FEW COMPLICATIONS.**—Notwithstanding these organizations the direct work of the grower and packer is little interfered with. The orchardist grows his prunes, dries them at home, or at his co-operative drier, as formerly, notifying the Association at what packing house he wishes to deliver them, and then waits for the Association to market his product and pay him his money. He is entirely free from the disagreeable conditions that formerly attended the marketing of his crop. The taking of samples to the

several packers and agents, obtaining bids, delivering prunes subject to critical inspection and possible rejection, and the collection of his money, are all features of marketing eliminated from the present scheme. Under this system fruit raising is systematized just as any other business. Marketing becomes a separate and distinct part of the grower's work, which, in common with his fellows, is delegated to a representative who, like himself, is a grower. He is thus left with more time to devote to the endless details of growing the high quality of fruit which the market demands.

The duties of the packer are very little changed. Nearly the same growers deliver fruit at his packing house as formerly. He is notified by the Association how much he is expected to pack and sell, and his recompense for his several duties is clearly designated. In packing and selling he is subject to a few conditions. He must pack honestly, and subject to inspection by a man appointed by the Association. He must sell only at a price designated by the Association, and cannot buy from those not members of the Association, nor sell except through brokers who will agree to handle only Association fruit.

**A NEW ERA.**—With the culmination of all these conditions favorable to the success of the co-operative movement for the marketing of California's most valuable product—dried fruit—a new era dawns. For the past fifteen years the producers of California have been approaching this stage. Successive failures have only strengthened their determination to succeed. Events have been steadily forcing them to the inevitable result. Gradually the prophesy of the wise has been fulfilled. Depressed conditions have forced the truth upon the minds of the skeptical. New converts have steadily been added to the army of co-operators. The result is an almost perfect co-operation of the prune growers of California in one body, and those of the Northwest into another, with a like amalgamation of the raisin growers in the San Joaquin valley.

**THE FUTURE.**—This year the California Cured Fruit Association will handle only prunes. The low price for peaches and apricots this season will prepare the way for the Association to secure the major part of these two fruits next year. This will place the peach, prune and apricot industry on a stable basis. There is little doubt but that the raisin growers will be equally successful. The green fruit raisers must inevitably follow suit. This, together with the natural advantages which California is endowed with, will place her in the first rank of States—the pioneer in co-operative marketing.

An instance of the world's respect for people who resolve to help themselves is seen in the effect produced in most distant parts by the announcement that the Prune Association had reached a working basis. The New York Commercial, speaking of the strengthening of the prune market, adds: "It is likely the market will go slightly higher when full particulars of the prune combine organization come to hand. The strengthening effect on the prune market was further in evidence during the day, and the report that the combine's plans had succeeded apparently struck European markets rather forcibly, for cables were received from different points, all asking for offers of prunes." This ought to strengthen any weak ones there may still be in this State.

## THE POULTRY YARD.

### Mr. Van Every's Suggestions.

In the new catalogue of E. Van Every of Santa Teresa Poultry Farm there are some timely hints on methods and policies with fowls which may be of advantage to some of our readers. Mr. Van Every has been in the business long, both along producing and commercial lines, and his advice is that of an expert.

**THE PROFIT.**—To make money in the poultry business one must have a good supply of stock and eggs to sell when the demand is good and prices at their best. Where hens are used for incubation this end may be accomplished by dividing the hatching season. In the fall one should hatch all the chicks possible during the months of September and October. In our climate the fall-hatched chicks do finely and are fairly well feathered by winter. If provided with dry quarters at night they continue to grow and thrive throughout the winter, and will supply fryers and young roasters in the spring, when the prices are always good. Eastern stock which arrives at this period is mostly old and therefore does not come into direct competition with our young stock. The fall-hatched females will supply eggs when the older hens are moulting. The spring hatching should be confined to the months of February, March and April to supply market stock and winter layers.

Pullets hatched earlier than the 1st of March are liable to moult late in the fall or winter, and the result is no more eggs until spring. Late hatched chicks never make so good a growth and are not of much use, as they only become fit for market at a

time when most every one in the business has a few fowls to sell, which in the aggregate glut the market.

The mid-summer and early fall markets are always quite low for poultry, late fall, winter and spring the highest—a good long time in which one can realize on their product if one has but sown the seed at the proper time to enable one to take advantage of the market. The market for eggs commences to improve about the 1st of July, and from this time until the spring flush prices are satisfactory and remunerative. The fall chicks should be in good trim for the early layers and the spring chicks coming in later will keep up the supply, thus enabling one to take advantage of good prices. Where one is fully equipped with incubators, brooders and shelter for the young stock, the hatching may be continued from the 1st of September through the winter to good advantage, in fact raising chicks artificially is winter work, and it is then that chicks for broilers must be gotten out.

**MARKETING EGGS AND POULTRY.**—Many having good flocks of fowls fail in getting as satisfactory returns from them as they would if they made themselves more familiar with the requirements of the market they aim to supply and the details required to put their produce in shape attractive to the trade. Having a good strain of layers of large white eggs all possible care should be exercised in shipping them to market in proper shape in order to command the highest possible price. One should get good cases and fillers, paint them and stencil the same with their name or brand. A little straw should be put in the bottom of the case so the top of the fillers, when replaced, will be even with the top of the box. This will avoid the chance of damage in shipment and the cases when opened will present a neat and attractive appearance. Should one ship to the city market, a good reliable commission house can be selected which has a first-class trade and makes a specialty of poultry and eggs. Do not change about from one house to another, as it is a great advantage to dispose of your product through the same channel. Your consignments then become known and the buyers know where to look for them if they have found them satisfactory.

**HANDLING EGGS.**—Gather the eggs each day in the afternoon and pack them immediately in the cases, small end down; they look larger and more uniform if packed in this way. Put in no small or off colored eggs and carefully wash all dirty ones. A little sapollo will remove stains from the dirty eggs. By having proper nests and in sufficient numbers in the houses one will seldom have to hunt for eggs in out-of-the-way places. In case one should find a nest with a number of eggs in it, which has been overlooked, it is best not to take the chances of putting them in the case, as in addition to having one's eggs large, white and clean they must be absolutely fresh. One's name or brand on a case must be a guarantee that the contents are strictly first class in every respect.

**HANDLING FOWLS.**—In marketing poultry, sell off the surplus stock as soon as possible, as when young they will in almost every instance bring as much or more than if kept until fully matured, and one saves their keep for a number of months. It will pay to have good light coops of sufficient height for the fowls to stand up and show themselves to the best advantage. Ship in lots of uniform size and variety. Mixed lots do not sell well, and a few large ones shipped in a consignment of smaller ones seldom sell for more than the market price of the small. Have your poultry fat, as this is an important factor in getting profitable returns. If the cockerels are yarded by themselves there will not be much difficulty in having them ready for market at any time when prices are favorable. Do not put too many in one coop, as in addition to the danger of death in transit they are liable to arrive in a mussy condition and will not sell as well. Do not put in sick or out-of-condition fowls, as they only spoil the sale of the lot and are sure to be reported dead on your account of sales. Cockerels over nine or ten months old do not class as young roosters in the city market, and where the spurs show about three-eighths of an inch or more they are called stags and bring the price of old roosters. By observing the above details one will soon see the advantage to be derived from exercising a little care to have all shipments beyond question, in the way of better prices and more prompt returns.

Two slow but interesting changes are taking place in Behring sea. The immense quantity of debris that is borne down the Yukon from its sources and sides is being deposited in the sea beyond the mouth of that mighty stream, and its weight causes the bed of the sea to subside. A corresponding rise in the earth's crust is going on along the chain of the Aleutian islands. Not only are the islands themselves increasing in size in consequence of being lifted up out of the water, but new islands are being formed in the gaps between the others. In some instances the new islands are the result of the rise, and in others they are the result of volcanic action. Most of the Aleutians are of volcanic origin, and they mark the position of a fold in the earth's crust that is predisposed to eruption. In time there is likely to be a natural bridge from America to Asia along this route, but nobody now living is going to see it.



## Agricultural Review.

### ALAMEDA.

**BEET INDUSTRY.**—Niles Herald, July 6: The Alameda Sugar Works at Alameda is looking forward to a very good season, if one should judge by the improvements under way. The old beet sheds have been torn out and 4000 feet of new trestle has been erected similar to that put in last year, where the trains are run up and the beets are dumped from the cars direct into runs. The agents report about 5000 acres contracted. The outlook for a crop is very good at present, considerable more so than a month ago, when it was feared a pest was destroying the young plants.

**VINEYARD PROSPECTS GOOD.**—Livermore Herald: Early in the spring vineyardists were discouraged. A succession of dry seasons affected the vines seriously and a severe frost at a critical stage left most of them without the hope of a crop and very dubious as to the future of their vineyards. Fortune smiled upon them finally. Early in May in half an hour's time fully an inch of rain fell. A more opportune shower never descended. The languishing vines revived and sent out new growth and new blossoms, and the growers whose first crop was blighted by frost will get a fair second crop, and they have a good show of wood for next year. This is more marked in some vineyards than in others, and while the crop will not be up to the average the situation generally is far better than the most sanguine grower had any hope for. The most remarkable case is that of Mont Rouge Vineyard, which the frost devastated to such an extent that no crop was expected by Mr. Bon and he even had fears that some of his vines would not survive the season. No vineyard in the valley presents a more thrifty appearance now than Mont Rouge, and Mr. Bon informs us that he will have a far better crop than last year.

### COLUSA.

**NORTH WINDS.**—Colusa Sun, July 4: The north winds usually end up for the summer with a big blow about the first week in June. Sometimes it comes as late as the middle of June, and in 1898 put it off until the 26th. This year it looked like we were going to miss it altogether; but the last day brings a blow—the last blow of summer! We may expect immunity now until September. It has been one lucky streak for the farmers that they have had all June in which to harvest. There has been no wind to blow out the grain. There was a light wind about the first week—about the time we mentioned that a good one was due—and to the hot days of that little blow may be attributed the shortage in the yield. It cooked, instead of blowing out.

### FRESNO.

**FIRST CARLOAD OF MELONS.**—Fresno, July 7: The first carload of melons was sent by the Fresno combine to Seattle yesterday. The melons averaged sixteen pounds. Two cars were sent to-day and eight will go out Monday to various points.

**NEW WINERIES.**—Fresno Republican, July 5: It was recently noted that G. West & Son had begun a new winery 2½ miles north of Selma, and now this firm is preparing to erect another winery 6 miles west of town in a fine wine producing district. The material is being shipped for the construction of the building. T. R. Minturn is general manager and D. B. Harris will be manager of this county's two wineries.

**FIG COMBINE.**—The subject of co-operation among fig growers has been discussed and yesterday steps were taken to organize. A meeting was held at which A. Gordon presided and W. D. Foote acted as secretary. After discussing the feasibility of the project the following committee was appointed to devise ways and means of organization: H. Burness, F. G. Berry, L. H. Smith, Mr. Mitrovich and G. R. Taylor. The fig industry in this county is quite important, the product being 1500 tons. It is reported that one year \$250,000 was made out of figs.

### GLENN.

**GRAIN FIRES.**—Orland Register, July 6: A granary belonging to Mr. Trumbull, containing 1000 sacks of seed barley and a lot of feed, was burned Saturday. On Sunday a grain fire destroyed 800 sacks of barley and 200 acres of wheat on the Bailey ranch, 10 miles southwest of Willows.

**DEEP PLOWING PAYS.**—The value of deep plowing was illustrated on the Greenwood ranch this season. That portion which had been plowed 9 inches deep yielded eleven sacks per acre, while that portion where the plowing was from 5 to 6 inches deep yielded only six sacks per acre. This ought to be an object lesson to others.

**How to Do It.**—Who says Glenn county ranches don't pay a profit? We know of one ranch of about 1000 acres, not far from Orland, which brought its owner \$3100 crop rent in 1899 and bids fair to yield more than that this year. This was not accomplished, however, with wheat as the only crop. Barley, oats and hay were raised and fed to hogs and cattle. Every ranch in the county can be made to pay if properly handled.

### HUMBOLDT.

**FAILURE OF POTATO CROP.**—Arcata Union, July 8: The potato crop will be almost a total failure in the valley sections of the county this year. The blight struck nearly all fields on Arcata bottom and in Eel river valley last week, following the few sultry days we had then. No kind of weather can bring the crop back to a growing condition.

### KERN.

**CATTLE AND SHEEP SHIPMENTS.**—Bakersfield Echo, June 28: Six carloads of cattle were shipped yesterday to Los Angeles by the Kern County Land Company. They contained 168 head. Sheep are also being shipped into Los Angeles. The first consignment went south last week. Simon Maier, the wholesale butcher, was the purchaser. Some time ago he bought 4000 head from the Kern County Land Company, paying, it is said, \$4 per head.

**TO PROSECUTE CATTLE THIEVES.**—Hanford Journal, July 3: Cattle growers on the south fork of Kern river in the mountain district have organized an association for mutual protection, and pledged themselves to pay into a common fund, according to the amount of stock they own, for the purpose of prosecuting cattle thieves.

**FRUIT INDUSTRY.**—Fruit shipments continue. The Earl Fruit Company has been forwarding three or four carloads a day for the past two or three weeks. Several teams are hauling in fruit from the Wible orchard, and reports say a big crop is being gathered there. The peach crop of the county is above the average. Prunes are said to be a very good crop. Growers claim that each year adds very materially to the importance of the fruit industry of this county, and that very soon this section will cease to be regarded as little more than a stock range.

### LOS ANGELES.

**ORANGE SHIPMENTS.**—Pomona Progress, July 5: On June 27th the Pomona Fruit Growers' Exchange shipped its 415th car of oranges, the last of the season. This, compared with the 165 cars sent out last season, is a remarkable showing, and a still further increase appears when it is known that each car contained twenty-six more boxes than last year, and therefore the 415 cars would have made 465 cars if loaded in the old manner. The increase in fruit handled is due partly to the larger acreage represented in the exchange and partly to the big crop.

### MERCED.

**CREAMERY BUSINESS INCREASING.**—Merced Sun: It is pleasing to note the rapid increase in the business at the local creamery. About fifteen months ago it started in with less than 2000 pounds of milk a day, while now it receives over 17,000 pounds, a gain of 1000 pounds a month since it first started.

### NAPA.

**NEW PACKING HOUSE.**—Napa Register: Wm. Fisher is building a new packing house at Union station. The ground dimensions of the building are 40x80 feet, height three stories. An engine and boiler will be included in the equipment. Mr. Fisher expects to start in drying apricots next week. S. M. Tool has been busy at his cannery the past two weeks canning cherries. Next week he will begin on apricots. He says that this year more cherries have been canned by him than ever before, and that there will be a good crop of apricots to handle.

### RIVERSIDE.

**INDIO SHIPPING MELONS.**—Riverside Press, June 30: As a result of the wells recently sunk at Indio agriculture is receiving a decided impetus. An example of this was the carload of watermelons which were shipped from Indio to-day by H. E. Tallent. The melons were thoroughly ripe and of good size.

### SACRAMENTO.

**HORTICULTURAL COMMISSIONERS' REPORT.**—Record-Union, July 6: The Horticultural Commissioners handed in their report for the month ending June 30th, as follows: "Our inspectors have pursued their regular course of action in going among the growers, advising better ways to keep their orchards clean, leaving pamphlets and formulas for the making of washes. There is but one scale that is bad. That is the brown apricot

scale. We did think the lime, sulphur and salt wash would be sufficient, but by the rapid increase of the scale it does not seem to do. We have given the wash a good test this spring and by fall will know its worth for this kind of scale. In the country there was more spraying done than in any single year for a long time. Reports from different parts of the county are to the effect that a beetle having the appearance of the ladybug is doing considerable damage. It feeds on all kinds of green stuff, eating into the peaches while still green. The expense of the inspectors for this year to date amount to \$350."

### SAN BERNARDINO.

**EXPORTING CHEESE.**—Chino Champion, June 29: Louis Richenberger of the Rincon Cheese Factory shipped 3300 pounds of cheese to San Diego, from whence the purchasers will send it to Manila as a trial shipment. Mr. Richenberger also delivered in Pomona 1300 pounds, and to-day shipped 1600 pounds. That makes 6200 pounds shipped for the week.

### SAN LUIS OBISPO.

**GRAIN CROP.**—San Luis Obispo Tribune, July 6: The Cass thresher started out Monday morning. The grain crop through this section is quite good, and by those competent to judge the yield in the Cayucos section is estimated at 50,000 sacks—about half last year's crop. The straw is very short and the yield of grain is large proportionately.

### SANTA CLARA.

**FARMING COMPANY INCORPORATED.**—San Jose Mercury, July 3: Articles of incorporation of the Saratoga Farming Co. have been filed. The directors are Leon Baille, S. Hustache, Louis Hustache, Charles Alviso and L. B. Archer.

**EVERYBODY HELPS.**—Mercury, July 8: The apricot harvest has fairly commenced in the vicinity of Campbell. Considerable fruit has come in the past few days, both to the canner and to the drier. A marked increase in the population of the town may be noted, especially the feminine portion. All earn their honest dollars and seem to enjoy the getting—even the daughters of our well-to-do citizens, bankers, merchants and professors. They do not think it beneath their dignity to earn pin money by preparing fruit during the busy season, either at the cannery or at the drier. We have no aristocracy here—not even an upper ten.

**PHYLLXERA THREATENS VINEYARDS.**—Pacific Tree and Vine, July 7: Phylloxera has been steadily gaining in its encroachments and we believe that it has entered nine-tenths of the vineyards. Some of the first attacked are entirely gone. Thus far only a few have been replaced. A few new vineyards on resistant roots have been started and some are just beginning to bear. We referred last fall to a disease in some vineyards very strongly resembling the Anaheim Disease, or California Vine Disease, as it has been called, and again this spring have had occasion to speak of the bad appearance of many vines. As the season passes some vines are improved, while others are assuming a dying condition or already dead. Within the last week several samples of diseased leaves and fruit have been brought in. We have consulted with some of our most experienced vineyardists—W. Pfeffer, H. Lefranc, P. Mason and several others. There is not an unanimous opinion in the matter, but certain samples of foliage almost exactly duplicate the fine colored plate in Viala's great work describing this disease. The only difference we can detect is that our samples had more of a distinct margin of color than the plate of Viala's. The spots and other looks are the same. The effect upon the fruit is to cause it to shrivel and at last dry up or fall off. Where there are Mission grapes in a vineyard these are the vines which seem first affected.

### SHASTA.

**FRUIT GROWERS ELECT OFFICERS.**—Anderson News, July 7: At the annual meet of the Shasta County Fruit Growers' Association D. L. Hawkins was re-elected president, J. R. Spann vice-president, and G. E. Edwards secretary and treasurer.

### SONOMA.

**PEAR PROSPECTS.**—Sonoma County Farmer, July 6: J. N. Belveal stated that Healdsburg pear growers are so handicapped by local freight tariff that they cannot ship East. Ukiah and Hopland pears are fine, but the Lake county crop failed to develop seeds and will not stand up for long distance shipment, although it is all right for canning. This peculiar condition was noted last year for the first time. [Were they not "second crop" pears?—ED.] It is estimated that there are 1500 tons of Bartlett's contributory to Santa Rosa, but some of the orchards have been sold, and as it is only about thirty days before the season opens the

growers assembled at Horticultural Hall last Saturday concluded that it was too late to think of organizing an association to market pears this season.

### TEHAMA.

**SPLENDID WELL.**—Corning New Era, July 7: R. A. Foster has a splendid well. It is 42 feet deep, 8 feet in diameter, and has yielded 60,000 gallons of water in ten hours. Last Saturday he had four streams running through his 20-acre orchard, and says he has all the water he has any use for. This well is on the red hills, about a mile east of town. Mr. Foster uses a 3-horse dynamo for motive power.

### YOLO.

**APRICOT CROP HARVESTED.**—Winters Express: The apricot crop is about cleaned up. Shipments to the canneries amounted to something over 600 tons, and a low estimate places the dried crop at sixty tons. There has really been no loss here this season, the cannery shipments getting the fruit out of the way before it was too ripe, and thus leaving considerable help for those who did not ship. It is reported that considerable fruit was lost in the Capay valley because of lack of help, and heavy losses are reported around Vacaville. In size and quality, Winters dried apricots are A1 this year and the fruit is beautifully colored.

**WATER FOR IRRIGATION.**—Woodland, July 5: J. M. Wilson, expert irrigationist, and his assistant, Frank Adams, acting under authority from the Agricultural Department, have about completed one branch of their investigation at Cache creek. They have been engaged in ascertaining the amount of land irrigated and susceptible of irrigation; the amount of water available for irrigation purposes and the methods employed for distribution. They are now examining records for the purpose of making an abstract of the records of claim to water; character of these records, including the number of claims, total volume claimed, places where recorded, and the ease or difficulty with which the validity of any claim can be determined.

### NEVADA.

**SALE OF HORSES.**—Ely News: Horses and mules are no longer a drug on the market. There are buyers all over the State and several large bunches have recently changed hands. The Ford Livestock Co. of Eureka sold last week to W. S. Pyle of Eau Claire, Wis., 500 head of horses, from yearlings up, at \$15 per head, and about 150 mules at \$25 per head. Several smaller bunches of range horses were sold by other ranchers in the same locality at prices ranging from \$4 to \$12. The Central Nevada states that G. Russell of Elko sold between 400 and 500 head of as fine range horses as was ever shipped out of the State, their destination being Minneapolis. The Denver Stockman states that twenty-one carloads of range horses were sold on that market in one day last week at prices ranging from \$7 per head for yearlings to \$37.50 for matured, well-finished animals.

### OREGON.

**PRUNE GROWERS MEET.**—Portland Oregonian, July 4: The directors of the Cured Fruit Association of the Pacific Northwest held a special meeting yesterday, the object of which was to decide upon some plan for handling the present prune crop. According to the original agreement, the association was to secure 75% of the acreage. This, it was found, was very hard to do, and a letter was sent out asking all stockholders to agree to pool, provided 75% of the growing prune crop could be secured. The answers received were nearly all in favor of proceeding on that basis, though the directors from southern Oregon notified the association that the prune growers of their locality would not agree to substituting 75% of the crop for 75% of the acreage, and other directors reported from eastern Oregon that the growers generally insisted on carrying out the original agreement. In order to do this, it was decided to make one more effort to get the desired acreage between now and Aug. 10. In the event that this can not be done, the association proposes to formulate some other plan and handle the crop of those who so desired it. S. B. Chase, a director, and H. E. Dosch, secretary, resigned. S. P. Kimball of Salem was elected secretary.

**TRANSFER OF ELEVATORS.**—A deed has been filed at Pendleton whereby R. B. Smith transfers to the Puget Sound Warehouse Co. all of the wheat warehouses in this county and in Washington formerly controlled by the Kershaw Grain Co. The houses sold are situated in Clyde, Lee, Dry Creek and Adkins, Washington; and in Vansycle, Waterman, Stanton, Helix, Warren, Fulton, Hillsdale and Athena, in Oregon. It is understood that the Puget Sound Co. has bought other warehouses, making the total number bought recently about seventy-five or eighty.



## THE HOME CIRCLE.

### Science a Century Ago.

Scant were the gleanings in those years of dearth;  
No Cuvier yet had clothed the fossil bones  
That slumber, waiting for the second birth;  
No Lyell read the legend of the stones;  
Science still pointed to her empty thrones.

Dreaming of orbs to eyes of earth unknown,  
Herschel looked heavenward to the starlight pale,  
Lost in those awful depths he trod alone.  
Laplace stood mute before the lifted veil,  
While home-bred Humboldt trimmed his toy ship's sail.

No mortal feet these loftier heights had gained  
Whence the wide realms of nature we descry;  
In vain their eyes our longing fathers strained  
To scan with wondering gaze the summits high  
That far beneath their children's foot-paths lie.

Smile at their first small ventures as we may,  
The schoolboy's copy shapes the scholar's hand;  
Their grateful memory fills our hearts to-day.  
Brave, hopeful, wise, this bower of peace they planned,  
While war's dread ploughshare scarred the suffering land.

Child of our children's children yet unborn,  
When on this yellow page you turn your eyes,  
Where the brief record of this May day morn  
In phrase antique and faded letters lies,  
How vague, how pale our flitting ghosts will rise!

Yet in our veins the blood ran warm and red;  
For us the fields were green, the skies were blue,  
Though from our dust the spirit long had fled.  
We lived, we loved, we toiled, we dreamed like you,  
Smiled at our sires and thought how much we knew.

Oh, might our spirits for one hour return,  
When the first century rounds its hundredth ring,  
All the stage secrets it shall teach to learn,  
To hear the larger truths its years shall bring,  
Its wiser sages talk, its sweeter minstrels sing!

—Oliver Wendell Holmes.

### Waifs and Strays.

It had been a very hot day, but a shower had laid the dust, and now teams were seen emerging from the various lanes into the turnpike, all going down to meet the train from New York.

In the wide porch of farmer Morris's old homestead stood his daughter Millicent. The occupants of the passing wagons nodded to her as they went by. Her own team waited under the maples near, but Millicent seemed in no hurry to go. She was thinking. Thought was twisted in the coils of her soft brown hair, expressed in the grave lines of her usually laughing face and in the deep, gray eyes, that at present were watching the footpath across the meadows that led to the Calder farm.

Millicent Morris, Martha Graves, Will Ellis and Adam Calder, children of neighboring farmers, had grown up together, a happy, inseparable band. When there had been childish differences between them it had always been Martha and Will on one side, and Millicent and Adam on the other, and she had grown up to feel that he belonged to her. Of course he belonged to her; it would be absurd to think of his marrying any one else, and yet—he had kept away from her so much of late she could not understand it.

Martha had just left her. Will Ellis and she were to be married in September, and she was naturally full of happiness. But to pretty Millicent, as she stood watching the path along which no one came, life seemed at present rather disappointing. Well! She might as well go to the station, too.

\* \* \* \* \*

Around a newly emptied ashcan in one of the dirtiest streets on the extreme west side of the city three ragged urchins were gathered, peering eagerly down into its depth and all talking excitedly. "I want it! It's mine! Tum up Jenny! Tum up!" These were the continuous exclamations of the smallest of the three, as she reached her grimy hands down into the grimmer depths. From the abyss, in answer to the call for "Jenny," came a faint, sickly mew, unnoticed, or laughed at by the loungers about the sidewalk and doors of the tenements. There seemed no help for the kitten, until by combined efforts of its three friends pulling together on one side the can tipped over and the children and can rolled together into the gutter. From its depths crawled the skeleton of a kitten, dragged and weak, but not without spirit. No sooner did it appear than a big rough boy (who had thrown it into the can) seized it, and was about to put it high up on the lamp-post out of its owner's reach, when the kitten squirming around, planted all of its foreclaws in his hand, just as little three-year-old Kit, learned already in modes of warfare current in the vicinity, set her sharp little teeth in the calf of his leg. The sudden and severe attack made him drop the kitten. Kit seized it and hugging it in an overclose embrace exclaimed: "I yubs it! I yubs it!" and pressed its dirty little face to her own dirty little face rapturously.

The big boy was not really bad; he was only having fun in his own way, and so he did not strike Kit or kick the cat, as he might have done unmolested; he just rubbed his leg ruefully, used strong language and threatened what he would do. Then, stirred to anger by the laugh of those around him, he offered to fight any one who laughed again. Some one did laugh, a ring was formed and a fight seemed imminent; but just then came a new diversion. A murmur was heard on the outside of the crowd, a quite looking lady was coming up the street, and from mouth to mouth and all along the block was heard the exclamation: "The country! The country! The kids are going to the country!" The fight was off. Kit was forgotten.

The lady was one of the agents of the great Fresh Air Charity, and had come to collect a party that was to leave the city that day. They came out from the tenements all along the block by twos and threes and in squads; there was great running to and fro, a general stir throughout the neighborhood; every one came to see them off.

They were ready at last, sixty in all. The lady had pinned on the last of the blue badges by which they were to be recognized, when she became conscious of a small ragged figure which followed her about, and a very earnest voice which said, as it had been persistently saying: "Kit'll go too! Kit wants to go! Gimme a wibbon? 'You want to go, baby? I should love to take you," said the lady. "Where is your mother? Why didn't she speak to me before? 'She ain't got no mother; her mother's dead. She just stays around and no one takes care of her; please let her go.'" It was the big rough boy who spoke for her now, and Kit sidled up to him in entire confidence and said in the most amiable manner, as though granting a favor: "Kit'll go."

A few questions to the women about brought out Kit's history. Her parents were poor but decent folk; her father had been killed in a railroad accident while seeking employment a year before. Sorrow and hard work had been too much for the mother, who was a delicate woman, and she had died two months ago, leaving Kit to the neighbors. They were all ready to feed her and give her sleep-

ing room, and so she had gone from one to the other as she chose, she and her kitten. But there was no one whose duty it was to clean and clothe and mother her, and "the Island" would at last be her place.

The party was full, but the agent decided to take her. Some farmer might have pity on the little waif. She would be responsible for Kit's safe return, at any rate. Safe return! As though any one would ever ask if Kit were safe or not! So the baby tramp and her pet were badged with blue ribbon and went with the party.

\* \* \* \* \*

The station at C—was an unusually busy place this afternoon; farm wagons were drawn up under the trees all along the road; wagons from near-by farms and from away back in the country. The Fresh Air children from New York were to come by this train; and the farmers who had agreed to take them each for a visit to their own homes awaited them. Amid a crowd of men at one end of the platform stood Adam, a great, sun-browned, blue-eyed giant. Milly's love for him was returned in overflowing measure, but with its growth a shrinking diffidence had taken possession of him, until now he was almost afraid to meet the questioning of her gray eyes. He loved her more than he could express, he had tried to tell her once, but had made such a wretched blunder of it! He had managed to say something which had offended her when he was trying his utmost to show his devotion; and now he could never do it again, though his whole being cried out with desire for her love and companionship. He was thinking of all this as he leaned against a post of the platform, and paying little attention to anything but the movements of Millicent, as she went in and out among the groups of people.

What was happening meanwhile was this. The train came up, stopped, and from it poured a troop of children—"Fresh Airs," sixty-one in all. A lady handed the station master a list, re-entered the train, and it moved on to the next station to leave more children. Then the agent called out from the list by twos the names of the children and the name of the farmer pledged to take them. Two by two they entered the wagons and were driven away to the houses that were to shelter them for a season. There remained on the platform one unclaimed infant—a little blue-eyed scrap, her toes protruding from her shoes, her ragged hat hanging down between her shoulders, a forelorn-looking kitten held tightly in her arms—Kit, homeless, friendless, in the midst of strangers. If no one had compassion on her she was to stay until the following day with the station agent, when the lady on her return trip would pick her up.

All undismayed by her situation, Kit had been deciding for herself, and now, her deliberations ended, she went directly up to Adam, put her hand in his, and said confidently: "I'll go wif you, Jenny's tired, you'd better carry her." And bewildered Adam took the kitten unresistingly, amid the laughter of the crowd. Millicent watched them closely; she had decided to take the little one herself, but now she would wait to see what Adam would do. Poor Adam! He had no family of his own. The Widow Wells was his housekeeper, and she did not care for children and disliked cats. He really wanted to take the child. It was such a short time, perhaps she might be willing. "Tum," said the little one, impatient of his thinking. "Let's do home. Kit's hungry." This decided him, and exclaiming, "All right, baby; we'll try it," he lifted her in his arms and turned to go. As he did so grateful Kit threw her arms around his neck, and with a deep, satisfied "Fank you," kissed him fervently, to the delight of his neighbors, who cheered them lustily as they disappeared down the road.

This was too much for Millicent. What a hero he was to her just then, to bear the laughing remarks of the crowd as he did! He never could care for that baby; she must get him to let her have it. "Hadt'n't you better get in and ride, Adam?" she asked, as she over-

took him on the road; and Adam, who was already beginning to wonder what he should say when he met the widow, accepted gladly, realizing that there was a real help in trouble. Kit looked at her for a few moments and then deciding that she was all right, asked: "Are you his mudder?" and receiving a negative answer: "Don't he want you to be his mudder?" Poor Adam! He would gladly have answered yes if he could not have her otherwise; but Kit followed up this question with one to him: "Does you get junk sometimes?" And amid the merriment caused by this unexpected query they arrived at the farm, and all went to meet the widow. She objected seriously; she did not so much mind the child, but she had a natural horror of cats, and could not stand the kitten, but Kit and Jenny could not be parted. Millicent begged for both, and at least coaxed for the cat, but in response to all her efforts Kit's only answer was to sidle up to Adam and say decidedly: "We's goin' to stay wif you." And they did stay.

During the weeks that followed the footpath between the farms became again well worn. Milly and Kit were firm friends. It was Milly who made her new clothes, Milly with whom she spent a good portion of each day, Milly who curled her hair and petted her cat, and she grew very fond of her. But it was Adam who had her warmest regards ("Fader Adam," as Milly had taught her to say), and she went back to him every night if by any chance he did not come for her.

Between Kit and the Widow Wells there was no love, and the cat had been a continual grief. At last there came a day when it distinguished itself and brought about an end of the trouble. Since the day when Adam, coming suddenly into the kitchen, had found the housekeeper, with nervous horror on her countenance, mounted on a chair, while the kitten rubbed, purring, against its legs, he had tried to keep it out of the house; but the cat, like its mistress, knew its own mind, and its special delight was the kitchen hearth.

On the day in question it lay there, stretched at full length in comfort, while Kit was playing near by. Mrs. Wells came in and stooped down to look at some pies that were baking in the oven. The kitten, with a playful purr, sprang to her shoulder and began rubbing its head against her. In a frenzy of fear she flung it from her, and it struck in its descent the handle of a saucepan which was full of boiling water upsetting it over itself, the widow and Kit. The outcries of the three brought Adam in haste from a near-by field, to find Mrs. Wells with a badly scalded foot, while Kit, with one hand wrapped in her apron, carrying the yowling kitten in the other, had started the field to Millicent, the tears streaming down her cheeks as she went.

First helping Mrs. Wells, whose injury was severe, and calling some one to wait upon her, he started after Kit and arrived just in time to see her throw herself in Millicent's lap and hear her exclaim between her sobs: "Oh Milly! Do tum and be our mudder! We wants you so! Adam and I does—please tum and take care of us!" And dropping on the settee besides them he found voice to say: "Yes, do come and take care of us, Milly, we want you so—at least Adam does. Will you Milly?"

Later in the evening, when the burns of Kit and the cat had been dressed and they were both sleeping, and Adam had explained that he had rather have her as a wife than as a mother, happy Milly said to him: "You stupid old Adam! I believe you never would have told me if it hadn't been for Kit." Then seriously: "Let's keep her always, Adam. I could not bear to think of her going back to that awful life." Adam agreed heartily. And so it came that when shortly after this Adam brought Milly home to take care of him and his, Kit, dressed in white and looking very different from the little New York waif, divided honors with the bride. And the kitten, decorated with an elaborate pink bow, stretched itself in undisputed possession on the kitchen hearth.



## Union.

"One common bond of blood unites us all,  
One righteous sense of freedom and fair play  
Alike in sport and trade and battle fray,  
And in this kinship we shall stand or fall.

"One common mother when our race was young  
Sent us abroad to make the lands our own;  
Like colors in our kindred flags are shown,  
Milton and Lincoln spoke our common tongue.

"The voice that speaks alike to great and small,  
That quells the little people's sordid wrath,  
That warns the warring nations from our path—  
The voice of equal justice unto all."

—Ainslee's Magazine.

## A Valuable Fruit.

Ripe, uncooked apples are among the most valuable of our fruits. It has been said that any man who can and will eat two good-sized apples in the course of every twenty-four hours will never have gout, and if this destroyer of comfort has already fastened its fangs in his system, apples will vanquish even the most persistent form of this legacy of luxurious living, writes Mrs. N. S. Stowell. Raw apples are much to be preferred for health reasons to those that are cooked. Heat makes chemical changes and destroys or devitalizes an acid that seems to act directly on the lime, salts and earthy matter created in the system by gouty and rheumatic conditions. As a next alternative baked apples are commended. Baked apple pudding, made with graham flour, sifted, is excellent and healthful. Baked sweet apples and cream are a dish fit for a king. Sour apples are good if not too acid. They sometimes sour the cream, in which case they may cause distress, especially if eaten by delicate children. Bread and milk, or well-cooked johnnycake and milk, with sweet or mildly tart apples cut in pieces like dice, are a popular supper dish in many households. As a substitute for butter, apple sauce and marmalades of various sorts may be used to great advantage, and if furnished in sufficient variety, children soon come to like them much better. Of dried and evaporated apples it may be said that they are merely substitutes for fresh fruit, which should be put up in cans. Much of the delicacy and flavor of apples is allowed to evaporate with the moisture. Those put up in cans are much more satisfactory in every way. Good, ripe apples and their products in sauces and the like may be eaten at almost any time, with great benefit, save by the few, who, by reason of some constitutional peculiarity, find them unwholesome.

## House Cleaning Hints.

It is well to remember at cleaning time that marks made by scratching matches on paint may be removed by first rubbing with lemon, then with whiting, and afterwards washing with soap and water. Stains on marble may usually be removed by covering with a paste of whiting and common soap, which should be left on for two or three days. Smoked and dusty lamp globes may be cleaned by soaking in hot water containing a little sal soda, after which they may be scrubbed with a brush and soapsuds. Piano keys should be cleaned with a soft cloth moistened with alcohol.

## In Trimming Your Hat.

Girls who trim up an extra hat for warm weather are reminded that the best models poise the spray of flowers at the left side instead of in front, where the space is reserved to display your ribbon bow or bow of straw. Remember this in arranging your trimming and then the hat will be up to date and lose the "home made" air which is given by unfashionable arrangement of the same materials.

## How to Boil Clothes.

The purpose of boiling clothes is to expand the fabrics by steam and thus to loosen the dirt and allow it to drop out; there is no good but actual harm derived from "cooking" the clothes; they do not require "cooking," but cleansing, and when they are cleansed that is sufficient. Hence, within half an hour after the water first begins to bubble they should be immediately removed and plunged into clear cold water. While the clothes are boiling they may be turned with a clothes stick, but they must not be punched or lifted in such a manner as to tear them. The common custom in many households of putting the second boilerful of clothes into the boiling dirtied water from which the first boilerful has been taken is wholly opposed to good laundry work. When the cook wishes to keep the juice in the meat that is to be cooked by boiling, she plunges it into boiling water. When she wishes to extract the juices and have them in the water for soup, etc., she puts the meat on in cold water. If you wish to get the dirt out of the clothes instead of driving it into the fiber, put the clothes on in cold water, and do not allow them to stand in the boiling water soiled by them until they are dyed yellow.

## Borrowing.

Betsy Jane (that is my wife) once complained to me about her neighbors, Mrs. A. and B., sending nearly every day to borrow tea or coffee or soda, or something of that sort, and that the kind sent home was usually of poorer quality than what she lent. I told her to lay by the packages when they came home, and save herself all the trouble of putting up more. She did so, and always had a package of tea and another of soda on the shelf ready to hand out when the children came to borrow. The packages kept growing smaller till finally the neighbors got offended at the little parcels and wouldn't borrow of Betsy Jane any more.

The longer on this earth we live  
And weigh the various qualities of men,  
Seeing how most are fugitive  
Or fitful gifts at best, of now and then—  
Wind-wavered copse-lights, daughters  
of the fen—  
The more we feel the high, stern-featured  
beauty  
Of plain devotedness to duty,  
Steadfast and still, nor paid with mortal  
praise,  
But finding amplest recompense  
For life's ungarlanded expense  
In work done squarely and unwasted  
days.

—James Russell Lowell.

"ALGERNON is very interesting," said the stockbroker's daughter. "What does he talk about?" inquired her father. "Why, he's ever so well posted in Shakespearean quotations." "Young woman," said the financier, sternly, "don't you let him make sport of your ignorance. There ain't no such stock on the market."—Tid-Bits.

NORWEGIAN LEGISLATORS propose that girls who do not know how to knit, sew, wash and cook should be refused permission to marry. Daughters of wealthy men are not to be excepted.

## DOMESTIC ECONOMY.

## The Electrical Kitchen.

Cooking would be more of an art and less of a gamble if the heat could be put where it was wanted and nowhere else, and its intensity were under the perfect control of the cook. The oven that will not come up to the right temperature, or that will not bake on the bottom, the chimney that draws the wrong way when the wind is from the northwest, the dampers that refuse to do as they are bid, the kindling that burns out without lighting the coal, all tend to make cooks the most ill-tempered of mortals. The gas range is admirable in that it supplies a heat that can be tempered at will, but it fouls the air. It burns up the oxygen and leaves

carbonic acid gas, and if there is a gas stove connection that does not leak a little I have yet to see it, states a writer in Ainslee's Magazine. Perhaps the escaping gas may not flavor the food, but some profess themselves able to detect it in the viands. But be that as it may, dwellers in city houses need more pure air rather than less of it. If we do not live as long as we might it is because we shut out the sunlight and the air too carefully.

The electrical kitchen is not only admirable, it is ideal in its application of heat. It does not steal oxygen; it does not foul the air. It is steady; it can be directed to the top, bottom or the sides of the thing to be cooked, for it does not depend upon the combustion of fuel or the convection of hot air, but upon the resistance of iron to the electrical current. Instead of having to plan so the cooking be done when the fire is in the range, the electrical kitchen is ready at any hour of the day or night to bake or broil, set the stewpan to sizzling or the hot water urn to bubbling, to brew the five o'clock tea or to disconnect the midnight Welsh rabbit from the fear that the alcohol bottle is empty and all the drug stores shut up; to temper the chill of the spare bed or to warm the toes under the desk; to heat the curling iron or the smoothing iron, all these appliances being connected by a flexible wire cord to a socket in the wall whence comes the energy. It is an exemplification of the wholesale principle; instead of a thousand chimneys smoking at tremendous sacrifice of coal, there need be but one big fire, whose heat is turned into motion, that into electricity, and that, in turn, back to heat again.

## Ice Cream With Variations.

Most families welcome a dessert of ice cream on a hot day, and once in the habit of preparing it is established it is the easiest of desserts to make and the varieties obtainable are endless.

The plain cream is liked by most people better than the cooked custard. To make it use three pints of cream to one pint of milk and one and three-quarter cups of sugar. Scald the milk, melt the sugar in it, and when it is cool add the mixture to the cream. If vanilla is the flavor required, add a tablespoonful of the extract or of the pounded vanilla bean sugar; if lemon, a tablespoonful of the extract. For pistachio ice cream blanch and pound to a paste three-quarters of a cup of pistachio nuts and one-quarter of a cup of almonds. Any fruit may be used, such as strawberries, peaches, raspberries, pineapples, cherries, apricots and bananas, by mashing them thoroughly and adding them after the cream is partly frozen. For coffee flavor, add a cup of black coffee to one and three-quarter cups of cream, omitting the milk in the foregoing rule.

Chocolate flavor may be obtained by melting two squares of chocolate and stirring it smooth in a little of the milk, and adding to the milk, cream and sugar.

Macaroons, cocoanut cakes, brown bread, almonds and walnuts all make delicious changes. The macaroons, cakes and bread should be dried, browned in the oven and rolled fine. The nuts should be chopped fine. About two cupfuls of any of them would be needed for the recipe given. Shredded pineapple chopped fine, or the fresh fruit grated, can be added the same as other fruits. With fruit, coffee or chocolate, sweetening must be added to suit the taste, but it should be remembered that the mixture must be sweeter before it is frozen than after.

## Rhubarb Jam.

Peel the rhubarb and cut into pieces one-half inch long. Put into a large earthen bowl, and cover with sugar in the proportion of one pound of sugar to one quart of rhubarb. Allow this to stand over night, 15 to 18 hours. Be sure that the bowl is amply large, as there will be a flood of juice by morning. Strain off the juice and sugar into a preserving kettle; when it begins to boil, add the rhubarb. Boil

slowly for an hour, or until the preserves assume a deep red color, stirring carefully to prevent burning, and removing any scum that rises to the top. About 15 or 20 minutes before removing from the fire, peel the yellow rind from one lemon, chop it fine, and add to the preserves, together with the juice of two lemons, this being the usual proportion to about four or five quarts of preserves, but the quantity of lemon may be varied to suit the taste. This gives a piquant flavor otherwise lacking, in spite of the acidity of the rhubarb. When bottled, keep in a cool, dark place. This rhubarb jam is very nice in open tarts, or as a filling for boiled roly puddings.

## A Pie-Making Secret.

A certain housekeeper announces that she had discovered the secret of having the upper and lower crusts of a pie adhere to each other. "Do not," she says, "grease your pieplates, because it causes the crust to cling to the plate, and becomes sodden, especially in fruit pies. Dry some slices of bread in the oven until they are a light brown, and while hot roll them into dust. Put it in a canister and use to strew over the bottom of pieplate; the sides do not require anything. Lay in the bottom crust, trim as usual; then with your fingers push the edge of the crust so that it stands up nearly straight from the edge of the plate, leaving a space between it and the edge of the plate.

"Put in the filling and put on the upper crust, in which plenty of airholes should have been made. Now, with the palms of your hands press the paste up against the rim of the plate with enough force to cut the paste off. Give an upward motion to the hands while doing it and the crust will go on full. Now take the point of a knife and place the upper edge neatly into the space between the lower crust and the plate, and you will have the pie completely covered, as a lid covers a box. With your finger tip softly spread, but do not press, the edge of the pie toward the edge of the plate, and if you have followed the directions you will not take a leaky pie from the oven."

## Domestic Hints.

If fruit jars are opened five minutes after they are sealed and filled to the brim with hot fruit there will be no mold or empty spaces at the top. To sweeten musty or fruit-tainted cans leave them several days filled with dry earth, then empty, wash in cold water and thoroughly dry before replacing the covers.

STRAWBERRY BISCUITS.—Take one pound of lump sugar, eight eggs and a sufficient quantity of strawberry syrup to wet this and beat to a cream; add a pound of flour and a small share of thinly sliced, firm, dry berries. Pour the paste into buttered tins and bake at a gentle heat for half an hour, turn them and cover their surfaces with a preparation of meringue and crushed strawberries. Replace them in the oven for another quarter of an hour, or until the dressing is dried.

TURKEY SOUP.—Take the bones and scraps left from roast turkey, chicken or any kind of game. Scrape the meat from the bones, and lay aside any nice pieces, no matter how small. Remove all the stuffing, and keep that by itself. Break the bones, and pack them closely in a kettle. Cover with cold water. Add one small onion, sliced, one teaspoon of salt, and a little pepper. Simmer two or three hours, or until the bones are clean. Strain, and remove the fat. Put the liquor on to boil again, and add for every quart of liquor one cup of cold meat, cut into small pieces, and half a cup of the stuffing. Or omit the stuffing and thicken the soup with flour. Simmer till the meat is tender, and serve at once. If there be a much larger proportion of meat and stuffing left, use it in making scalloped turkey or croquettes. This is much better than to boil meat, bones and stuffing together. In that case the stuffing absorbs the oil, and gives a strong, disagreeable flavor to the soup.



## FLORIST AND GARDENER.

### Forcing Vegetables.

Our correspondence indicates that many Californians are wondering whether it would not pay them to grow vegetables under glass for the market as it is now being done on a very large scale at the East. In considering the matter two things must be remembered. One is that we have thermal positions where even the tenderest vegetables endure open air conditions, while in the East and South vegetable forcing has no competition with the open. Another local condition is a limited population and a limited number of people who will pay prices which profit in forcing requires. Still, there may be money in forcing on a small scale, providing it is done economically by those who will do their own work and be pleased with moderate compensation for their time. We have at present no faith in forcing enterprises as a line of large investment. That may come later.

Still, it is a fact that many of our readers can use glass to advantage if they do it skillfully and as an adjunct to their open air work. To promote this we shall give a very interesting account of some facilities for forcing published in a bulletin of the North Carolina Experiment Station by Prof. W. F. Massey, who has given much attention to improving practices in the South. In his contrast between Southern and Northern conditions our readers will recognize advantages which California enjoys in a conspicuous degree.

**NORTH AND SOUTH.**—The great development of market gardening in vegetables in the South Atlantic coast plain, and particularly in the part of North Carolina where the conditions of soil and climate, and the facilities for transportation of the products by rail and water, are so favorable, calls for greater skill on the part of the growers, and more intensive culture. Our people in all lines of soil culture are too much inclined to spread out over large surfaces, and to try to do things on a large scale. This tendency is an inheritance from the old cotton planting days, and it is hard for Southern men to realize what may be done by intensive culture or a small area. Our market growers have mainly confined their attention to those crops like the early potato and cabbage and peas, which bring returns at once, and which require little special skill on the part of the grower. The result has been that at times the product of these things is so great that no one gets fair returns from his investment and labor. Years ago, when the development of trucking in the South seemed to the gardeners near the large Northern cities to threaten the destruction of their business, they were compelled to turn their attention to a more intensive way of gardening, and to use glass in a skillful manner to produce crops of high quality out of the regular season. In this they have succeeded to such an extent that market gardening under glass has become an established industry near all the great cities of the North, and the profits from such intensive culture are far greater than any made in the open ground anywhere. Thus the Northern gardeners have been enabled to compete with the products from the far South and the tropics, by reason of the superior quality of the products thus grown, and their better condition when offered for sale. To such an extent has this culture under glass grown in the North that men are now growing under glass, in the semi-arctic climate of Vermont, winter cucumbers and other vegetables for the New York and Boston markets, at points as distant from market as North Carolina, and under conditions far more expensive and difficult than any here. The Northern gardener under glass is compelled in many places to use double glazed sashes on his houses to exclude the cold, and far more expensive heating arrangements, and a great deal more of coal than would be needed in heated structures here. Our abounding sunshine, even in the coldest winter weather, and the absence of the long sunless spells with which the New England gardeners have to contend, would give us a vast advantage in greenhouse culture in winter. Then, too, the fact that crops like lettuce, which they grow in heated houses, can be produced here in simple frames and loose glass sashes in as great perfection as they grow the same in heated houses gives us an advantage that we should not be slow in adopting.

**CLOTH AND GLASS.**—With our growers, as soon as they begin to consider the matter of winter gardening, the first thing is to get something which they imagine is cheaper than glass. Our gardeners seem to think glass an exceedingly costly article. Hence, when they propose to grow lettuce, they make great wide beds and cover them with cloth, which is commonly kept on too constantly, thus really retarding the plants, and in these wide and high frames with the cloth cover it is almost out of the question in severe spells to prevent serious damage from frost, which would not be the case in narrow, low, glass-covered frames. Instead of being cheaper, the cloth is, in the long run, far more expensive than glass, and, when the difference between the crops is considered, it is the most costly from the start, because of the less profit that can be had from it.

Gardening under glass requires more careful study

and greater watchfulness than gardening in the open air, and it behooves us to gain by experience before branching out on too large a scale. When once a man who is in love with his calling begins to grow better products than his neighbors he soon reaps his reward in better prices. The lettuce, for instance, which is grown under plant cloth goes to market usually in barrels, and is sold as "Southern field lettuce" by the barrel. Lettuce grown well under glass and shipped in handy boxes is sold by the dozen at a higher price, and competes with the Northern greenhouse lettuce. The gardener with glass gets his lettuce into market at the Christmas holidays, and is ready at once to replant for a crop to compete on more favorable terms with the crop of the man who is using cloth, and as the spring crop usually sells for more than the midwinter crop his lettuce, being in better condition, brings more money. I have gotten three times the price for lettuce the first of April that I got during the winter months, though the first paid very well. The many uses to which glass sashes can be applied is another argument for their use. After the lettuce crop is shipped the tomato plants are hardened off in the frames, and, as after the first of March in this climate the lettuce does not need the glass, an extra set of frames can at once be used for the tomato plants that have been started in hotbed or greenhouse. And after the tomato plants are removed to the field the very tender egg plant can be set in the frames and protected during chilly nights, and thus brought on at a time when it will command a good price. Or a hill of cucumber can be planted under each sash from plants started in pots in the greenhouse and brought on earlier than those in the open ground far south of us. Then, after all the plants have used the glass, there is no better place for the drying of fruit in summer than under these same sashes. Those whose interest is in the strawberry crop can use the sashes to cover strawberry plants set for this purpose in frames, and if the sashes are put over them the first of March or a little earlier the crop is rapidly advanced, and the blooms protected from frost, so that the fruit goes to market far ahead of the open air crop.

Therefore, if you intend to adopt intensive gardening, and strive for the production of crops in winter, we would urge that you drop at once and forever the idea that plant cloth is cheaper or better than glass, for it is neither.

**COLD FRAMES.**—The name cold frame is applied to a simple frame set on rich soil and covered with glass sashes. This name is to distinguish it from the hotbed in which a pit is dug under the frame and filled 2 feet deep with fermenting manure to heat the frame above. The hotbed soon becomes a cold frame as the heat of the manure dies out. Hotbeds are little used nowadays by gardeners, because they are in the long run far more expensive than heated greenhouses, and far more laborious and troublesome to manage. The sashes for the cold frames should be of the regular size—3 feet wide and 6 feet long. It has been found by long experience that this size is the most easily handled, and makes a bed more easily worked than larger or longer sashes. The sash being, then, 6 feet long, the frame to receive it will be nearly that width, and can be made as long as one chooses. The rows of frames in a framing ground should be far enough apart for a cart to go easily between each row. This will give room to pull off the sashes entirely on occasion, and room to get around with manure, etc. The frames are constructed of 1½ or 1½-inch stuff, and should be 16 inches high at the back or north side and 12 inches on the south side, and should, of course, run east and west, with the slight slope of the glass to the south. Between each sash let into the sides, with a dovetail on each end, a 3-inch strip of stuff, but do not nail it fast. Simply let it hold the sides together by the dovetail. On this strip nail an inch parting strip to form a slide for the sashes which rest on the first strip, which is flush with the top of the frame. Some gardeners have dispensed with the crossbars entirely, and fasten the sides of the frame firmly to posts, simply setting the sashes across from side to side. They claim that this is an advantage, besides saving lumber, as the whole frame is clear, and they can use a horse in preparing the ground. But it will always take two hands to handle the sashes in this way, while with the slide, one man can attend to the airing, and can give little or more as needed, and the crossbars, being simply dovetailed, are easily knocked out while the ground is being prepared. We much prefer to use the crossbars, and a further advantage is that the crack between the sashes is closed to the cold.

Sashes for frames should be made with a groove on the bars just deep enough to allow the glass to slide in end to end. This is a great saving, as no puttying is needed, but care must be taken to fit the glass up close, and to drive a tack at the lower end to prevent the glass from sliding down. With glass put in in this way, if one is broken there is little trouble to slide the others up and put in a piece at the bottom, and the sashes are lighter and more easily handled than when puttied.

**HOW TO BUILD A CHEAP GREENHOUSE.**—For the gardener who only wishes to grow egg plants, cucumbers, tomatoes, etc., and who does not intend to go into winter forcing under glass, but a small greenhouse will be needed. The house is to be used simply

for the starting of plants to be afterwards used in the frames, and to take the place of the uncertain and laborious hotbed. Such a house can be easily built by any one who can handle a saw and hatchet. The best and cheapest plan is that first recommended by the late Peter Henderson, in his book on Gardening for Profit, a book that should be read by all market gardeners.

It is built by using the ordinary sashes 3x6 feet that are used on cold frames and hotbeds. The walls of the house are made by setting good, stout posts in the ground in parallel rows 10 feet apart, and cutting them off at the height of 4 feet to receive a plate on which a gutter is constructed. The sashes are then attached in alternate pairs to the ridge pole, which is shaped to receive them. These alternate pairs of sashes are screwed fast to the ridge pole and the gutter to form the rafters to support the ridge. Alternating with these are pairs of sashes that are hinged to the gutter and loose at the top, where they are fastened down by an iron strap punched with holes to set on an iron pin in the ridge, so that they can be lifted and fastened open for ventilation. Benches are constructed on the inside, at a height of 18 inches below the glass at the eaves, on which soil can be placed or sand for pots to sit upon. This leaves a walk 2½ feet through the center of the house. The house should run north and south, and at the north end it is extended into a shed in which the heating apparatus is placed. If the house is to be heated with a furnace and smoke flue it should not be longer than 50 feet, but if hot water is used the length may be doubled or more according to the capacity of the boiler.

**HEATING.**—Heating with a flue is the cheapest method for a small house, but far the least satisfactory, as there will always be a difference in temperature between the two ends of the house, that nearest the furnace being the hottest. There is also trouble at times from the escape of gases from the most carefully made flue, so that, where the first expense can be accomplished, it is always best to use hot water, and to put in a boiler of such size that future additions may be made from time to time, and the necessity for more room occurs, without increasing the boiler. It is far cheaper to heat a house with a boiler of greater capacity than is actually needed, so that there is never any necessity for hard firing. If the heating is done by a furnace and flue there must be an excavation made in the north end of the building deep enough to accommodate the furnace and ash pit, and to bring the crown of the furnace arch just below the level of the floor of the house. The furnace should have a good-sized ash pit, and in inside area should be 18 inches wide by 30 inches deep, so as to give a good grate surface. From the top of the rear end of the arch a flue should be constructed of brick in a 9-inch wall rising to the level of the floor, and then gradually rising for a distance of 15 feet from the furnace. From this point terra cotta tile 6 inches in diameter can be substituted for the brick, and the flue carried around the house on a gradual rise till it returns to the chimney on the opposite side of the north end from the furnace. At this point the old practice was to make the chimney of four boards nailed together and set on end. But this is a dangerous practice, for in times of high winds and a strong draft the fire may get around the hundred feet of flue and set fire to the building. Hence it is better to terminate the flue in brickwork and top off with an ordinary terra cotta pipe. A good cast-iron door and frame are needed for the furnace, and the entire front can be bought from those who deal in greenhouse structure. Hard coal should be used in the furnace, so that a slow fire can be maintained during the night without constant attention, and the furnace should be of sufficient capacity to allow of a good mass of coal. If wood is used, the furnace should be at least 4 feet deep, and the ash pit and grate will not be needed, the draft being regulated by an opening in the door. The flue in this case should be made of brick the entire length of the house, as the blast from the wood will be too much for the tile. A wood-burning furnace may be made perfectly effective, if of sufficient size to admit large logs that will burn slowly all night without attention, but will be far less effective and satisfactory than hard coal.

**HINTS.**—A novice in greenhouse work usually keeps too much heat on and pays too little attention to the ventilation in the hours of bright sunshine. A night temperature of 50° is warm enough for most of the plants needed to be started early for the market garden, and in a flue-heated house the warm end, where there will be a temperature of 60° to 65° will be the place for egg plants and other tender things. A little practice will soon enable a man of intelligence to manage plants under glass successfully, and he will find that a small, fire-heated greenhouse is far better and in the long run cheaper than the manure-heated hotbed.

Such a house can be used for the winter-forcing of tomatoes, cucumbers and snap beans. For forcing tomatoes, the benches should be covered with a good, rich soil, and drainage made by having the benches made in slats, covering them with sods before filling in the compost, to prevent the earth sifting through. The plants should be grown from seed sown the last of August in the open air, and transplanted once before setting them in the house. They can be planted



15 inches apart along the sides of the house, and trained to single stems on wires a foot from the glass. Cucumbers are grown in a similar way, but need a higher temperature than the tomatoes. A crop of snap beans can be taken along the front of the bench before the tomatoes need all the room. The best variety for this purpose is an English sort called the Pride of the Market. It is of very quick growth and productive. We have grown them with great success with two plants each in a 6-inch flower plot. For forcing tomatoes a night temperature of 60° is best, while cucumbers do better with a night heat of 70° or over. The short American cucumbers should have their flowers pollinated by hand, but the long English cucumbers will grow to full size without pollinating.

Forcing vegetables and fruits in winter successfully requires the highest skill of the gardener, and the novice had better go slow until he learns by experience, or had better work at the business a while under skillful instruction.

## THE VETERINARIAN.

Answers by Dr. Creely.

### FOOT LAMENESS.

TO THE EDITOR:—I have noticed in your paper where parties have asked your advice in regard to lame horses, and hoping to receive the same favor I have written in regard to a young horse I have that weighs 1550 pounds, that goes lame in his left foreleg. To all appearance the lameness seems to be in his shoulder; he stands with that foot forward and raises it once in awhile as if it pained him. —C. TRUE, Paso Robles.

This is a plain case of foot lameness. If not in the hoof proper you will find an affection of the coffin joint. Cut down the hoof as much as possible; poultice and apply some good liniment over the top of the hoof.

### BOVINE ABORTION.

TO THE EDITOR:—In my dairy some of the cows are losing their calves all the way from several days to as many months short of full term. It does not seem to make any difference as to whether they are dry as much as five months or milked close up to calving. The calves are fat and beauties. The cows after two or three weeks seem to do as well as if nothing had happened. Heifers, as well as old cows, are affected. These calves are from three different sires put into the herd singly and from different sources. The only thing out of the ordinary noticeable to a layman are large patches on the placenta which seem to be raised above its surface about 1/2 an inch, and have the appearance of raw beef. Several dairies in same vicinity are similarly afflicted. There is no communication between them whatever, but all the cows run on alfalfa and generally drink ditch water. There was very little if any frost in this section the past winter. Is disease liable to be more prevalent among cattle after such winters? Is abortion contagious among cows and are they liable to abort in the future? Would like to hear from Dr. Creely along this line; also the experience of other dairymen. —DAIRYMAN, Los Banos.

Let me know exactly how many days each cow runs short. DR. CREELY.  
510 Golden Gate avenue, S. F.

### Not for Hog Cholera.

TO THE EDITOR:—In your veterinary column of your issue of the 23d ult., under the heading "Swine Plague," we notice that you recommend the use of "Pasteur's Virus" either as a preventive or cure for this disease.

For several years past extensive experiments have been made tending to the discovery of a satisfactory preventive or curative agent for swine plague or hog cholera. At the present time the whole thing is in the experimental stage. In the interest of the hog raisers it is to be hoped that at no distant date a vaccine virus for swine plague or hog cholera will be perfected and become of practical value and commercial value. At the present time nothing definite can be said on the subject. If we should be so fortunate as to be able to discover and make a vaccine that will protect hogs against swine plague or hog cholera in the same way that our anthrax and black

leg vaccines will protect certain kinds of live stock against anthrax and black leg respectively, it will certainly be a source of congratulation all round; but until that moment arrives we naturally do not wish our name even to be mentioned in connection with a vaccine or serum for hog cholera or swine plague. It would not only give rise to misapprehension, but would raise hopes that might be disappointing.

We trust that you will kindly give publicity to this statement, as the error in question has given rise to a misunderstanding of our position.

HAROLD SORBY,

Gen. Mgr. Pasteur Vaccine Co.  
Chicago, Ill.

### Alum Baking Powders in Congress.

Report that Evidence of Their Harmfulness is Overwhelming.

The Committee on Manufactures of the Senate were some time ago directed to investigate food adulterations, and accumulated a volume of testimony upon the subject from the best informed parties and highest scientific authorities in the country.

One of the greatest sources of danger to our foods, the Committee state in their report, exists in alum baking powders. The Committee found the testimony, they say, overwhelmingly condemnatory of the use of alum in baking powders, and recommended that such use be prohibited by law.

Senator Mason, discussing in the Senate the report of the Committee and the several bills introduced to carry the recommendations of the Committee into effect, said:

When we made this report we made it based on the evidence before us, and the evidence is simply overwhelming. I do not care how big a lobby there may be here for the alum baking powder, I do not care how many memorials they publish, there is no place in the human economy of human food for this thing called alum. The overwhelming evidence of the leading physicians and scientists of this country is that it is absolutely unfit to go into human food, and that in many cases—if the gentleman will read the evidence, some of the physicians say they can trace cases in their own practice—there are diseases of the kidney due to the perpetual use of alum in their daily bread.

When you mix a mineral poison, as they all say that alum is, it is impossible to mix it always to such a degree that there will not be a residuum left of alum, which produces alumina, and which contributes largely to the diseases of the people in this country.

I want to give the Senate an idea of the class of men we have called. They are the leading scientists from every college of the United States that we could get hold of.

Senator Mason, from a long list of scientists who had testified as to the hurtfulness of alum baking powders, and as to the healthfulness of cream of tartar powders, mentioned the following:

Appleton, John Howard, professor of chemistry, Brown University, Providence, R. I.

Arnold, J. W. S., professor, University of New York.

Atwater, W. O., professor and director, Government Experimental Station, Washington, D. C.

Barker, George F., professor, University of Pennsylvania.

Caldwell, G. C., professor, Cornell University, Ithaca, N. Y.

Chandler, C. F., professor, Columbia University, New York.

Chittenden, Russell H., professor, Yale University, New Haven, Conn.

Cornwall, H. B., professor, University of Princeton, New Jersey.

Crampton, C. A., professor, Division of Chemistry, Washington, D. C.

Fairhurst, Alfred, professor, chemist, University of Kentucky, Lexington, Ky.

Frear, William, professor, State College, Pennsylvania.

Jenkins, Edward H., professor, Department of Agriculture, State of Connecticut.

Johnson, S. W., professor, Yale Col-

lege, New Haven, Conn.

Mallet, John William, professor, University of Virginia.

Mew, W. M., professor, Army and Medical Department, United States Government.

Morton, Henry, president of Stevens Institute, Hoboken, N. J.

Munroe, Charles Edward, professor of chemistry, Columbian University, Washington, D. C.

Prescott, Albert B., professor, University of Michigan, Ann Arbor, Mich.

Price, A. F., medical director, United States Naval Hospital, Washington, D. C.

Smart, Charles, lieutenant-colonel, assistant surgeon-general, United States Army.

Sternberg, George M., surgeon-general, United States Army, Washington, D. C.

Tucker, Willis G., professor of chemistry and chemist of State Board of Health, State of New York.

Vaughan, Victor C., professor, University of Michigan, Ann Arbor, Mich.

Van Reypen, W. K., surgeon-general, United States Navy, Washington, D. C.

Wiley, Prof. H. W., Chief Chemist, United States Department of Agriculture, Washington, D. C.

Wyman, Walter, surgeon-general, United States Marine Hospital, Washington, D. C.

MR. PETTIGREW: Was there any testimony which showed that there were cases of injury to health as a result of constant use of alum?

MR. MASON: Yes; I can turn you to the testimony.

MR. PETTIGREW: I do not care to have the Senator turn to it. I simply want to emphasize the point. I agree with the Senator. It has always been my own impression that alum baking powder is injurious, but I wanted to bring it out and make it emphatic, if the proof sustains that position.

MR. MASON: I quite agree with the Senator. It is claimed that there is not a country in Europe that does not prohibit the use of alum. Certainly three or four of the leading countries of Europe to which I have had my attention called prohibit the use of alum in baking powder.

MR. PETTIGREW: Did the chemists who came before the Committee, these professors, generally testify—was it the result of their evidence—that the cream of tartar baking powder is healthy and does not leave a residuum which is injurious to health?

MR. MASON: Yes; I say emphatically yes; that the weight of the evidence is that, whenever any of these distinguished men who have a national reputation—the leading chemists of the colleges—were interrogated upon the point, they stated that fact, every one of them, to my recollection.

## PET STOCK.

### The California Cat Club.

First the chicken craze, second the dog fad, third the pigeon hobby, fourth the Belgian hare development, and, fifth, the Angora cat as a pet of society and the basis of a paying industry. This, says the Oakland Enquirer, is about the order in which the changes of fashion in pet stock have succeeded one another, if we say nothing of horses and ponies, which are always in favor, and if we omit the Jersey cow, who is an object of affection in some suburban homes, though utility is the governing motive in her case, as in that of the horse, also. The cat is an old family friend, who purrs by every fireside, but hitherto she has not been distinctly fashionable; hereafter Tabby is to be the object of care and devotion on the part of an organized circle of her admirers. Now, continues the Enquirer, we are to have the California Cat Club, with membership extending from Sis-kiyou's icy mountains to San Diego's coral strand, and Oakland is to be the home and headquarters of the association, of which the Enquirer gives the following account:

The idea is new here, but old elsewhere, as ideas are apt to be when taken up on the western outposts of civilization. Many cat clubs have

been organized throughout the United States during the past few years, their object being to promote the raising of fine stock and to induce those who are not lovers of the cat to recognize the beauty, the intelligence and the fascinating qualities of an animal whose organization, the most eminent naturalists tell us, is a singularly perfect one. One of the dictionary definitions says that the cat belongs to "a family of carnivora in which the organs of destruction reach the highest development," and yet this animal, which was created for purposes of destruction, has been so changed in disposition by being domesticated as to become the most petable of all beasts. A French wit, after seeing a huge mouser who was the pet of the poet Victor Hugo, said: "Nature gave man the cat in order that he might know how it is to keep a lion or a tiger by his fire-side."

With all the fierceness of the tiger subdued, though not extinguished, the cat becomes the favorite of refined and delicate natures, who understand and appreciate Puss. If you are worthy of her affection, a cat will be your friend, but never your slave; she keeps her free will, though she loves with great fidelity.

A well cared for short-haired cat is an animal of great beauty; still, it can not be compared with the long-haired Persian or Angora, which is rapidly displacing the Tabby of our grandmothers. There is something surprisingly aristocratic and imposing in their appearance—something that suggests elegant comfort and high-bred ease. The contemplation of the beautiful elevates the mind, if only in a cat; beauty of any kind is beauty and has its refining influences.

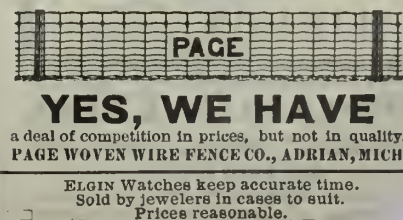
Although there are many beautiful specimens of Persian and Angora cats in California, there has never been any movement among the cat fanciers to combine for the encouragement of breeding good stock and the uplifting of the cat in general, in which respect California lags somewhat behind the procession, for Chicago, New York, London and the other big centers all have their cat clubs. One of the first clubs was organized by Lady Marcus Beresford of Windsor, Eng., and the Chicago organization is a branch and is named in honor of Lady Beresford. Some of the leading society people of Chicago are members of the club, including Mrs. P. D. Armour, Jr., Mrs. Augustus N. Eddy, John G. Shortall, president of the Humane Society, John W. Ela and J. H. Pratt. Horace White of the N. Y. Post is an out-of-town patron.

But the Cat Club is about to be organized in Oakland. Mrs. R. B. Beson and Mrs. C. C. Taylor, formerly of New York City, but now residents of Oakland, have been working diligently for



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the past two weeks to form a club, which will be known as the California Cat Club, the headquarters to be in Oakland. The club is not to be founded for financial purposes, but to benefit cat breeding, to promote cat shows and to raise the standard of cats in general. There will be a carefully kept pedigree book, in which the members' cats will be registered, and a record kept of the pedigree of all cats entered, and in this way the cats bred in California will be put on an equal footing with Eastern-bred cats.

The club will also work hand in hand with the Society for the Prevention of Cruelty to Animals, and will try in the near future to provide a refuge for sick and stray cats, where they will be kept until a good home is found for them, or, if necessary, will be humanely put out of their misery.

Mrs. Beson owns Brownbird, a brown Tabby Angora, bred in the noted Walnut Ridge farms of Boston, who is the mother of four most excellent kittens—one brown Tabby, two tortoiseshell and one black with white points—whose markings are perfect, according to the prescribed requirements. The sire of Brownbird's kittens is Silver Dick, a pink Angora with brown eyes, owned in St. Louis and valued at \$500.

This lady also owns a short-haired Persian, bred in the Beresford kennels, in London, called Dick—a silver-blue cat.

Mrs. Taylor, who is a member of the Louisville Cat Club, owns three fine Angoras—two white females and a blue male. Also a pair of black Persians, of which she is especially proud, both being magnificent specimens of their kind.

The following names are those who have promised to become members and give their support to the club: Mrs. Gilson of Fruitvale, the pioneer breeder of long-haired cats on the coast, and who has in her cattery some of the best strains in the United States; Mrs. Thompson of Lorin, who is a member of the Chicago Club, owns several fine cats, perhaps her most valued one being Nunie, a black Persian, winner of the gold medal in the Chicago cat show; Mr. and Mrs. Van Court, who own two beauties; Mr. and Mrs. Hugh Aldrich, Mrs. Pope, the Misses Chabot, Mr. and Mrs. Wagner, C. T. Johns, Dr. Carpenter of Alameda, Mrs. Judge Boalt, Mrs. Rousset, Mrs. Frederick of Alameda, Mrs. Gayton, Mrs. Louis Hammersmith of San Francisco, Mrs. Martling of San Francisco, Mrs. McCabe of San Francisco, Miss Freeman of San Francisco.

There are many others who own fine cats, but it was impossible for the organization to see all; so, if anyone not mentioned above would like to join as a charter member and will send the address to Mrs. C. C. Taylor, 839 Isabella street, Oakland, a card will be sent announcing the time and place of the first meeting. The meeting will probably take place early in July, in order to get the club in working order in time to prepare for a fall exhibition.

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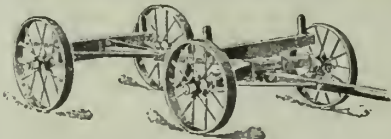
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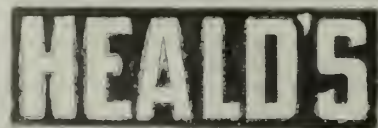
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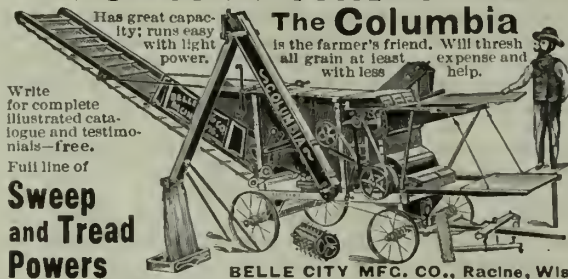
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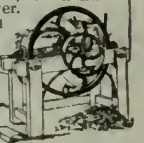
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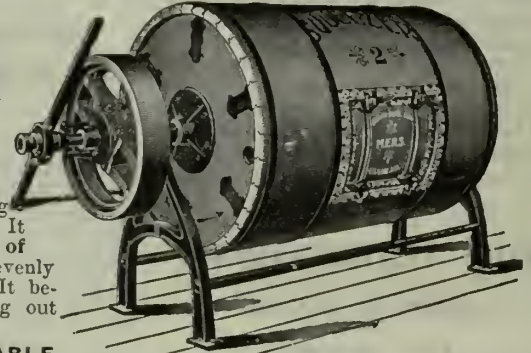


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## THE DAIRY.

### The Next Dairy Convention.

Six annual conventions have been held by the California Dairy Association, some of which have been well attended. The Western Creamery says that since oleo and quarantine of herds no longer excite dairymen they are disposed to ignore these annual meetings, and it thus becomes a study of how to induce them to attend and take part in the proceedings.

The seventh convention will try to solve this problem by arranging a programme of subjects in which the pocket of the dairyman is directly concerned, and thus interest him. The directors of the association met recently and considered thirty or more topics to go on the programme and selected twenty of them, as follows:

- How to increase the profits of our dairies.
- Advantage of the use of silos.
- Feeding millstuffs and ground feed.
- Improvement of milk delivered to factories.
- Supplementing alfalfa as cow feed.
- Providing summer feed.
- Improving the cheese product of California.
- Farm production of dairy feed.
- The making of cheddar cheese.
- Aeration of milk for factory use.
- Alkali test for lactic acid in cream.
- Comparative values of feedstuffs.
- Best dairy stock for alfalfa feeding.
- Barns, stalls and floors for cattle.
- Handling and feeding calves.
- Advantages of keeping dairy records.
- Sugar beet pulp as a dairy food.
- The financial standpoint of dairying.
- Qualifications of creamery managers.
- Value of dairying to the State.

The co-operative and proprietary creameries of the State are to be represented by delegates, and a session will be held to consider questions of direct interest to them, one of which is that of organizing a State creamery managers' board of trade.

The universities will also be well represented and something will be attempted in securing a dairy school through the Legislature. As the convention will be held in the State capitol building during the State Fair, September 11th and 12th, there will be a large attendance of stockmen and others in Sacramento, who may be interested in the proceedings and enlisted in the efforts to secure a school and veterinary assistance at the Agricultural College.

### A Proposed Test of Dairy Breeds.

It is proposed to hold a test of dairy cattle at the Pan-American Exposition, beginning June 3, 1901, and continuing for fourteen consecutive days. The Exposition Co. will, if the test is held, provide, free of charge, suitable buildings for the care of animals entered

in such test and will arrange for a Commission to take charge of the test, but will not hold such a test unless three or more dairy breeds agree to enter therein. Notice of the decision of dairy cattle associations in this regard must be filed with the superintendent of live stock, not later than August 1, 1900.

The test will be conducted under the direction and supervision of a Commission, to be composed of five persons to be selected from the staff of the agricultural colleges or experiment stations of the United States and Canada, each member of said Commission to be a specialist in the dairy department of the institution he represents. No member shall be chosen who is not acceptable to each Breeders' Association represented in the tests.

### Summer Care of Milk and Cream.

The souring of milk is due to bacteria. These bacteria are minute forms of plant life, and, like corn or any higher plant, their life depends on temperature, food and moisture.

Milk is a perfect food for these bacteria, which are common in the air of the milk room and cow stable, as well as on the cow and the hands of the milker. It contains the food and moisture, and summer weather furnishes the most desirable temperature for their rapid growth. The care of the milk, then, should be such as, first, to prevent as far as possible the entrance of these germs; secondly, to retard the growth of those which do gain access to the milk.

The body of the cow, the hands of the milker, the air, and the seams of the pail and other milk utensils are the common sources of infection.

In the summer time the flanks of the cow are usually free from manure, but her hair is well filled with dust, especially if the pasture borders a much traveled road. Frequently the cow wades in ponds and streams and the udder gets coated with mud, which dries on. At milking time the milker gives the udder and teats a few strokes with his bare hand before milking. The motion of milking shakes a shower of bacteria-laden dust into the milk. If the milker wets his hands with a stream of milk, this further softens the dirt on the teats and his hands, and the dirty milk drips into the pail, carrying a great many bacteria with it.

To avoid this contamination, the udder and surrounding parts should be wiped off with a damp cloth; this not only removes much of the dirt and bacteria, but leaves the hair damp, so that what remains does not fall off readily. The milker should wash his hands thoroughly and then milk with dry hands.

The Illinois Experiment Station finds that the number of bacteria which fall into the milk from an apparently clean, but unwashed, udder is 2020, as compared with 90, when the udder has been washed just before milking.

In spite of the best efforts, some bacteria will get into the milk; this makes it necessary to cool the milk as quickly as possible to 50° or below. Prof. Fraser said, before the Indiana State Dairy Association, that at a temperature of 93° germs common to milk multiply 200 fold in one hour, while at 55° only 8 fold, and at 45° are practically inactive. Cooling is, therefore, to be diligently sought for.—Purdue University Experiment Station.

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- 652,587.—PACK SADDLE—E. F. Bliss, Providence, Ariz.
- 652,588.—FILTER PRESS—M. P. Boag, Golden Gate, Cal.
- 652,663.—SULPHURATION TANK—E. C. Burr, S. F.
- 652,662.—CARBONATORS—E. C. Burr, S. F.
- 652,664.—FILTER PRESS—E. C. Burr, S. F.
- 652,665.—PULP PRESS—E. C. Burr, S. F.
- 652,715.—HYDRAULIC MOTOR—E. F. Cassel, Juneau, Alaska.
- 652,253.—THERMOSTAT—T. B. & F. A. Duncan, Newberg, Or.
- 652,605.—MANHOLE COVER—E. A. Faller, S. F.
- 652,513.—CULTIVATOR—G. J. Friend, Kingsley, Or.
- 652,556.—SNAP HOOK—J. A. Garitt, Waitsburg, Wash.
- 652,557.—STOVE—W. R. Hampden, Spokane, Wash.
- 652,264.—SAD-IRON HANDLE—Hawkins & Snelling, Lakeview, Or.
- 652,559.—AIR PUMP—C. M. Hobby, San Diego, Cal.
- 652,395.—EXCAVATOR—I. P. Lambing, Denver, Colo.
- 652,367.—PIPE CUTTER—T. Law, San Jacinto, Cal.
- 652,370.—PAPER WRAPPER—W. P. Murphy, San Jose, Cal.
- 652,546.—INDICATOR—W. F. Murray, S. F.
- 652,567.—DESK ATTACHMENT—C. F. Nesse, Elko, Nev.
- 652,546.—MAIL-BOX TIME INDICATOR—M. S. Norton, S. F.
- 652,696.—WIRE SPLICING TOOL—C. D. Smith, Corning, Cal.
- 652,300.—SIGNATURE GATHERER—D. M. Smyth, Pasadena, Cal.
- 652,649.—KEY-HOLE GUARD—Priscilla Stephens, Express, Or.
- 652,492.—REFRIGERATOR—C. J. Stuart, Puyallup, Wash.
- 652,411.—INDEX—A. W. Theirkoff, Redding, Cal.

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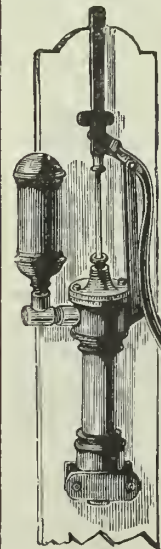
**P. H. MURPHY**, Perkins, Sac. Co., Cal. Breeder of Shorthorn Cattle and Poland-China Hogs.

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## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, July 11, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	July.	Sept.
Wednesday.....	80 @ 78½	82 @ 80½
Thursday.....	77½ @ 78½	79½ @ 81
Friday.....	78½ @ 79	80½ @ 80½
Saturday.....	78½ @ 79½	79½ @ 81½
Monday.....	78½ @ 78½	80½ @ 79½
Tuesday.....	78½ @ 78½	80½ @ 79½

\*Holiday.

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	July.	Sept.
Wednesday.....	6s 1½d	6s 2½d
Thursday.....	6s 3½d	6s 4½d
Friday.....	6s 3 d	6s 3½d
Saturday.....	6s 4 d	6s 4 d
Monday.....	6s 4½d	6s 4½d
Tuesday.....	6s 3½d	6s 3½d

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec., 1900.	May, 1901.
Thursday.....	1 15 @ 1 15½	— @ —
Friday.....	1 14½ @ 1 16½	— @ —
Saturday.....	1 15½ @ 1 16½	— @ —
Monday.....	1 16½ @ 1 16½	— @ —
Tuesday.....	1 15½ @ 1 16½	— @ —
Wednesday.....	1 17½ @ 1 18½	— @ —

## WHEAT.

While the market for wheat developed no radical changes since date of last review, the condition for the selling interest is certainly better than last noted. The bear clique, especially in Chicago, has been looking for excuses to hammer down prices, but has failed to meet with any noteworthy success in this direction the past week. There were showers in Manitoba, and the bears endeavored to make great capital out of the same, although the rain came two weeks after it was claimed it was too late for rain to do any good, and scorching weather still prevailed in the Dakotas, Minnesota and Kansas. The world's shipments are showing decrease, indicating that in all quarters wheat is being more firmly held. If it were not for the great scarcity of tonnage, wheat would certainly be doing better at this port and on this coast. As it is, shippers offered figures the past week for wheat which they would not have paid a fortnight ago. Buyers are securing very little wheat, most owners believing that it is better for them to carry than to unload at such low figures as have been lately obtainable. With more ocean tonnage here, as there should be later on, there will be reason to expect a materially better market. At close there was more firmness than at any previous date the past week.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, \$1.14½ @ 1.18½.  
May, 1901, delivery, \$— @ —.  
Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at \$1.17½ @ 1.18½ May, 1901, — @ —.

California Milling.....	\$1 12½ @ 1 17½
Cal. No. 1 shipping, alongside.....	1 07½ @ 1 10
Oregon Valley.....	1 07½ @ 1 10
Washington Blue Stem.....	1 10 @ 1 15
Washington Club.....	1 05 @ 1 08½
Off qualities wheat.....	1 02½ @ 1 05

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-1900.	1900-01.
Liv. quotations.....	6s3d @ 6s4½d	6s5d @ 6s6d
Freight rates.....	30 @ 32½s	40 @ —s
Local market.....	\$1 10 @ 1 12½	\$1 07½ @ 1 10

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

Trade in this line continues slow for the same reason stated in last review, most consumers, and particularly the large ones, being still fairly well stocked with flour purchased at old figures, or before the last quoted advance went into effect. These will do little or no buying for several weeks to come, unless prices incline more in their favor than at present. Should another advance take place in the near future, the heaviest buyers would manage through brokers to stock up for a time at the rates now current. This is a peculiarity of the flour trade which has long been in vogue, and is likely to continue for years to come.

Superfine, lower grades.....	\$2 25 @ 2 50
Superfine, good to choice.....	2 60 @ 2 80
Country grades, extras.....	3 15 @ 3 40
Choice and extra choice.....	3 40 @ 3 65
Fancy brands, jobbing.....	3 60 @ 3 75
Oregon, Bakers' extra.....	2 90 @ 3 25
Washington, Bakers' extra.....	2 90 @ 3 40

## BARLEY.

There has been a slightly better tone to the market the past week, and it would not be surprising to have materially better prices ruling for this cereal before the season is very far advanced. Many believe the crop will not prove as large as generally estimated. There is little selling pressure at present, especially on desirable qualities, and with anything like an active demand, stiffer prices would now be prevailing. Barley is certainly low, and any change in values is fully if not more apt to be to firmer than to easier figures.

Feed, No. 1 to choice.....	72½ @ 75
Feed, fair to good.....	67½ @ 72½
Brewing, No. 1 to choice.....	80 @ 85
Chevalier, No. 1 to choice.....	— @ —
Chevalier, No. 2.....	— @ —

## OATS.

A more active demand has been experienced for this cereal than for some weeks preceding, in a measure due to considerable purchasing on Government account, although inquiry from regular dealers showed improvement. Market was firmer, but in the matter of quotable rates there were no radical changes to record. Business was largely in old Whites and new Reds.

White Oats, fancy feed.....	1 22½ @ 1 25
White, good to choice.....	1 12½ @ 1 20
White, poor to fair.....	1 05 @ 1 10
Gray, common to choice.....	1 05 @ 1 12½
Milling.....	1 15 @ 1 25
Surprise, good to choice.....	1 25 @ 1 35
Black Russian.....	1 00 @ 1 10
Red.....	1 00 @ 1 15

## CORN.

Movement is not brisk, prices being too high for the average consumer, as compared with values ruling on other feed cereals. Stocks are principally Eastern product, and having been purchased to arrive, mainly by millers and local jobbers, they are being as a rule held at full current rates, the absence of selling pressure being a conspicuous feature.

Large White, good to choice.....	1 12½ @ 1 15
Large Yellow.....	1 15 @ 1 17½
Small Yellow.....	1 40 @ 1 50
Eastern, in bulk (carload lots).....	1 09 @ 1 11

## RYE.

Market is not burdened with offerings. Current rates are being well maintained.

Good to choice, new.....	92½ @ 97½
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## BUCKWHEAT.

There is not enough doing to enable the giving of more than nominal quotations. Market is practically bare.

Good to choice.....	2 00 @ 2 10
Silverskin.....	— @ —

## BEANS.

Business is of fair volume, considering the light stocks and the time of year, which is usually a quiet period in the bean trade. Aside from Government purchasing, there has been some shipping and local demand. Large Whites have received, perhaps, the most attention, and tendency of the market for this variety has been to a little more firmness. Values throughout were tolerably well sustained at the quotable range.

Pea, fair to good, 100 lbs.....	3 40 @ 3 60
Small White, good to choice.....	3 35 @ 3 45
Lady Washington.....	2 90 @ 3 05
Butter, small.....	— @ —
Butter, large.....	— @ —
Pinks.....	2 70 @ 2 90
Bayos, good to choice.....	2 85 @ 3 00
Reds.....	3 25 @ 3 75
Red Kidneys.....	— @ —
Limas, good to choice.....	5 25 @ 5 40
Black-eye Beans.....	3 25 @ 3 75
Horse Beans.....	2 25 @ 2 50
Garbanzos, large.....	2 50 @ 2 75
Garbanzos, small.....	2 00 @ 2 25

## DRIED PEAS.

Stocks are light, both of Green and Niles, are mostly in second hands and are being firmly held.

Green Peas, California.....	2 40 @ 2 50
Niles Peas.....	2 15 @ 2 25

## WOOL.

The local market is showing the same inactivity previously noted, but dealers are doing some purchasing in the interior of this State and also in Oregon, which is an encouraging symptom that it will not be very long before the resumption of business here. Prices reported paid in the interior are fully on a par with quotations given below, representing nominal values or asking figures current at this point.

## SPRING.

Humboldt and Mendocino.....	16 @ 18
Northern, free.....	14 @ 16
Northern, defective.....	11 @ 13
Middle Counties, free.....	14 @ 16
Middle Counties, defective.....	11 @ 13
Southern Mountain, 12 mos.....	8 @ 10
Southern Mountain, free, 7 mos.....	9 @ 11
Southern Mountain, defective, 7 mos.....	8 @ 10
Oregon Valley, fine.....	17 @ 19
Oregon Valley, coarse to medium.....	16 @ 17
Eastern Oregon, choice.....	15 @ 16
Eastern Oregon, fair to good.....	11 @ 14
Nevada, as to condition.....	14 @ 16
San Joaquin Fall Lambs.....	8 @ 9

## HOPS.

Nothing of consequence doing in this line in this center. Spot stocks and offerings are too small to admit of any noteworthy trading. Not only are supplies light, but include no choice out of second hands, the bulk of offerings being of too ordinary quality to be sought after. For favorite marks of new to arrive, buyers' views continue at 9 @ 10c, but not many of the kind desired are obtainable at the figures named.

Good to choice, 1899 crop.....	7 @ 10
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## HAY AND STRAW.

A little better tone has been developed in the hay market, especially for choice to select Wheat, both new and old. For fancy old Wheat \$11 per ton was realized in a limited way. While this is not a high figure, it is an improvement on previous rates. Choice new is not being offered freely, prospects being favorable for the same meeting with a better market later on. Values for common to medium qualities have not materially improved.

NEW HAY.	
Wheat.....	7 50 @ 10 00
Oat, fair to good.....	5 00 @ 7 00
Volunteer.....	4 50 @ 6 00
Alfalfa.....	6 00 @ 7 50

OLD HAY.	
Wheat.....	8 00 @ 11 00
Wheat and Oat.....	7 50 @ 10 00
Oat.....	7 00 @ 8 50
Barley.....	5 50 @ 7 50
Alfalfa.....	6 00 @ 7 50
Stock.....	5 00 @ 6 00
Compressed.....	7 50 @ 11 00
Siraw, ½ bale.....	25 @ 37½

## MILLSTUFFS.

Bran and Middlings were in sufficient supply for immediate needs, prices ruling about as last quoted. Shorts were not offered freely, but values were unchanged. Rolled Barley inclined against buyers. For Milled Corn full current figures were as a rule insisted on.

Bran, ½ ton.....	12 50 @ 13 00
Middlings.....	15 00 @ 18 00
Shorts Oregon.....	13 00 @ 15 00
Barley, Rolled.....	16 00 @ 16 50
Cornmeal.....	21 50 @ 25 00
Cracked Corn.....	25 50 @ 26 50

## SEEDS.

Business in this department is of insignificant volume, due to meager supplies of nearly every sort ordinarily quoted. Aside from a little jobbing trade in bird seed, the market is practically lifeless. In about thirty days values for new crop Mustard will probably be determined sufficiently to enable giving quotations.

	Per cth.
Mustard, Triesle.....	— @ —
Mustard, Yellow.....	— @ —
Flax.....	— @ —
Per lb.	
Canary.....	3½ @ 4
Rape.....	2 @ 3
Hemp.....	3½ @ 4
Timothy.....	— @ —
Alfalfa, Utah.....	— @ —

## BAGS AND BAGGING.

The market is barely steady for Grain Bags, with a fair movement to all the important grain sections in this State. Fruit Sacks are receiving some attention, prices for the same remaining quotably unchanged. Market for other lines of Bags and Bagging presents no new or noteworthy features.

Calcutta Grain Bags, buyer June-July.....	— @ —
Calcutta Grain Bags, spot.....	6¼ @ 6½
San Francisco Grain Bags, 22x36, spot.....	6¼ @ 6½
State Prison Bags in lots of 2000, ½ 100.....	5 65 @ —
Wool Sacks, 4 lbs.....	— @ 32½
Wool Sacks, 3½ lbs.....	— @ 28½
Fleece Twine.....	7½ @ —
Gunnies.....	— @ 12½
Bean Bags.....	4½ @ 5¼
Fruit Sacks, cotton.....	6¼ @ 7¼

## HIDES, PELTS AND TALLOW.

There is no improvement to record in quotable rates or general tone. It is the impression, however, that should the war in China become protracted, a firmer and more active hide market would follow.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	9½	8½
Medium Steers, 48 to 56 lbs.....	8½	7½
Light Steers, under 48 lbs.....	8½	7½
Heavy Cow Hides, over 50 lbs.....	8½	7½
Light Cow Hides, under 50 lbs.....	8½	7½
Wet Salted Kip.....	8½	7½
Wet Salted Veal.....	8½	7½
Wet Salted Calf.....	9	8
Dry Hides.....	16	13
Dry Kip and Veal, 11 to 16 lbs.....	15	12
Dry Calf, under 4 lbs.....	16	13
Salted Horse Hides, large.....	2 00 @ —	—
Salted Horse Hides, medium.....	1 50 @ —	—
Salted Horse Hides, small.....	1 00 @ —	—
Dry Horse Hides, large.....	1 50 @ —	—
Dry Horse Hides, small.....	75 @ 100	—
Dry Colts' Hides.....	50 @ —	—
Pelts, long wool, ½ skin.....	1 00 @ 1 25	—
Pelts, medium, ½ skin.....	70 @ 90	—
Pelts, short wool, ½ skin.....	35 @ 60	—
Pelts, shealing, ½ skin.....	20 @ 25	—
Deer Skins, best summer.....	27½ @ 30	—

Deer Skins, good medium.....	20 @ 22½
Deer Skins, thin winter.....	— @ 10
Elk Hides.....	10 @ 12
Tallow, good quality.....	4 @ —
Tallow, No. 2.....	3 @ 3½
Goat Skins, perfect.....	30 @ 37½
Goat Skins, damaged.....	10 @ 20
Kid Skins.....	5 @ 10

## HONEY.

Offerings continue to be mainly Amber Extracted, with a fair trade doing in this description within range of the figures quoted. Water white is scarce, both Comb and Extracted, and is salable to good advantage, there being considerable inquiry for this sort. Amber Comb is not receiving much attention.

Extracted, White Liquid.....	7½ @ 8
Extracted, Light Amber.....	7 @ 7½
Extracted, Amber.....	6 @ 6½
White Comb, 1b frames.....	12 @ 12½
Amber Comb.....	9 @ 11
Dark Comb.....	6½ @ 7½

## BEESWAX.

Market lightly stocked and firm. A shipment of 4653 pounds went forward by Panama steamer this week for Germany.

Good to choice, light, ½ lb.....	25 @ 27
Dark.....	24 @ 25

## LIVE STOCK AND MEATS.

Beef is selling at slightly improved figures, with supplies only fair and demand increasing. Mutton ruled steady at last quoted advance. Lamb and Veal were in light receipt and met with a firm market. Hogs were in only moderate supply, were mostly Eastern, and brought steady figures.

Beef, first quality, dressed, net ½ lb.....	6 @ 6½
Beef, second quality.....	5½ @ 6
Beef, third quality.....	5 @ 5½
Mutton—ewes, 7 @ 7½c; wethers.....	7½ @ 8
Hogs, hard grain fed, medium.....	5½ @ 6
Hogs, small, fat.....	5½ @ 6
Hogs, large, hard.....	5½ @ —
Hogs, acorn-fed.....	— @ —
Hogs, feeders.....	5½ @ 5½
Hogs, country dressed.....	6 @ 6½
Veal, small, ½ lb.....	8 @ 10
Veal, large, ½ lb.....	8 @ 9
Lamb, spring, ½ lb.....	8½ @ —

## POULTRY.

With only moderate receipts during greater part of the week of both domestic and Eastern poultry, the market showed improved condition, especially for chickens, which were most in request. Large and fat Hens, and choice Young Roosters without spurs, were salable above quotations. Turkeys continued in very limited demand. Ducks offering were mostly too small and poor to be desirable.

Turkeys, dressed, ½ lb.....	— @ —
Turkeys, live hens, ½ lb.....	10 @ 11
Turkeys, live gobblers, ½ lb.....	9 @ 10
Hens, California, ½ dozen.....	4 00 @ 5 00
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	4 50 @ 5 00
Fryers.....	3 50 @ 4 50
Broilers, large.....	3 00 @ 3 50
Broilers, small.....	2 00 @ 2 50
Ducks, old, ½ dozen.....	3 00 @ 4 00
Ducks, young, ½ dozen.....	3 50 @ 4 50
Geese, ½ pair.....	1 12½ @ 1 25
Goslings, ½ pair.....	1 25 @ 1 37½
Pigeons, old, ½ dozen.....	1 25 @ 1 50
Pigeons, young.....	1 25 @ 1 50

## BUTTER.

Choice to select fresh, either creamery or dairy product, is not plentiful, and market for butter of this class is moderately firm, with some sales above quotations. Cheap butter for pastry or cooking is also in light stock. Offerings are mainly medium grades.

Creamery, extras, ½ lb.....	19 @ —
Creamery, firsts.....	18 @ 18½
Creamery, seconds.....	17½ @ 18
Dairy, select.....	17½ @ 18
Dairy, seconds.....	16½ @ 17
Dairy, soft and weedy.....	— @ —
Mixed store.....	14 @ 15
Creamery in tubs.....	19 @ 21
Pickled Roll.....	18 @ 20
Firkin, California, choice to select.....	19 @ 21
Firkin, common to fair.....	17 @ 18

## CHEESE.

The market is without quotable change, but is not showing quite so much activity as when prices were easier. Stocks are mostly well held, however, and there is little or no probability of values receding from present levels.

California, fancy flat, new.....	9½ @ 10
California, good to choice.....	8½ @ 9
California, fair to good.....	8 @ 8½
California Cheddar.....	— @ —
California, "Young Americas".....	9½ @ 11

## EGGS.

Arrivals of choice to select fresh were not of heavy volume, and market for eggs of this class was moderately firm at rates quoted, a few fancy going at higher figures. For ordinary qualities of fresh, coming long distances or from warm weather points, the market was dull and weak, most buyers taking cold storage stock in preference to fresh of poor quality.

California, select, large, white and fresh.....	17 @ 18
California, select, irregular color & size.....	15½ @ 16½
California, good to choice store.....	13½ @ 15
Eastern, as to section and grading.....	14 @ 16
Eastern, cold storage.....	— @ —



## VEGETABLES.

Most descriptions now in season were in abundant supply for current requirements, market as a whole being quite favorable to buyers. Changes in quotable rates were not very marked, but those which did occur were almost without exception to a lower range of prices.

Asparagus, $\frac{1}{2}$ box.....	— @ —
Beans, String, $\frac{1}{2}$ lb.....	2 @ 3
Beans, Wax, $\frac{1}{2}$ lb.....	2½ @ 4
Cabbage, choice garden, $\frac{1}{2}$ 100.....	50 @ —
Cauliflower, $\frac{1}{2}$ dozen.....	50 @ —
Cucumbers, Bay, $\frac{1}{2}$ box.....	40 @ 50
Egg Plant, $\frac{1}{2}$ box.....	75 @ 1 50
Garlic, $\frac{1}{2}$ lb.....	2½ @ 3½
Green Corn, $\frac{1}{2}$ sack.....	50 @ 1 00
Green Corn, Alameda, $\frac{1}{2}$ crate.....	1 25 @ 1 50
Onions, Red, Cal., good to choice.....	60 @ 75
Onions, Yellow Danver, $\frac{1}{2}$ cental.....	90 @ 1 00
Okra, Green, $\frac{1}{2}$ box.....	1 00 @ 1 25
Peas, Sweet, garden, $\frac{1}{2}$ lb.....	2½ @ 3
Peas, Green, $\frac{1}{2}$ sack.....	1 00 @ 1 50
Peppers, Green Chile, $\frac{1}{2}$ box.....	50 @ 1 25
Peppers, Bell, $\frac{1}{2}$ lb.....	— @ —
Rhubarb, $\frac{1}{2}$ box.....	— @ —
Squash, Summer, $\frac{1}{2}$ large box.....	50 @ 60
Tomatoes, $\frac{1}{2}$ small box.....	30 @ 50
Tomatoes, River, $\frac{1}{2}$ large box.....	1 00 @ 1 50

## POTATOES.

No very brisk demand was experienced the current week, either for shipment or on local account, and market was in the main quite favorable to buyers, especially for other than most select, of medium and uniform size. The latter went to special city trade at an advance on quotations. Although the market for average offerings lacked firmness, receipts of potatoes were not heavy.

Burhanks, River, $\frac{1}{2}$ cental.....	40 @ 75
Burhanks, Bay counties, $\frac{1}{2}$ cental.....	— @ —
Burhanks, Humboldt.....	— @ —
Burhanks, Oregon.....	— @ —
River Reds.....	— @ —
Early Rose.....	— @ —
Garnet Chile.....	— @ —
New Potatoes, $\frac{1}{2}$ cental.....	40 @ 75
Sweet, River, $\frac{1}{2}$ cental.....	— @ —
Sweet, Merced.....	— @ —

## The Fruit Market.

## FRESH FRUITS.

Nearly all mid-Summer fruits were in fairly liberal supply, the aggregate of receipts proving larger than preceding week. Apples were in good demand and brought improved figures. The Apricot season is now at its height, heavy deliveries being made to canners, mostly on contracts. Market this week was lower for ordinary qualities, and the range in prices was wide, from \$8 to \$15 per ton for common to fair stock, with strictly choice Yellow quotable at \$17.50@20.00 per ton, a few fancy commanding above latter figure. Bartlett Pears are beginning to arrive in noteworthy quantity, but few strictly choice have yet been received. Choice to select are quotable at \$20@25 per ton, and are not likely to rule lower. Peaches were in increased receipt and market was easier; canners have not yet commenced on this fruit; most of the arrivals up to date have been early varieties and not suited for canning. Plums of ordinary varieties were in heavy supply, and cheap; a few of fancy quality brought comparatively fair figures. Early Grapes made a fair display and were cheaper than last quoted. Nutmeg Melons and Cantaloupes tended downward in price, with the quality improving. Arrivals of most kinds of Berries in season were only of moderate volume, but quotable values as a rule kept at a rather low range.

Apples, fancy, 4-tier box.....	1 00 @ 1 25
Apples, good to choice, $\frac{1}{2}$ 50-lb box.....	75 @ 1 00
Apples, common to fair, $\frac{1}{2}$ 50-lb box.....	40 @ 60
Apricots, Royal, $\frac{1}{2}$ crate.....	35 @ 60
Apricots, Royal, $\frac{1}{2}$ box.....	25 @ 50
Apricots, Royal, $\frac{1}{2}$ ton.....	10 00 @ 20 00
Blackberries, $\frac{1}{2}$ chest.....	2 50 @ 4 00
Cantaloupes, $\frac{1}{2}$ crate.....	3 00 @ 3 50
Cherries, Royal Anne, $\frac{1}{2}$ box.....	— @ —
Cherries, Black Tartarian, $\frac{1}{2}$ box.....	— @ —
Cherries, White and Red, $\frac{1}{2}$ box.....	— @ —
Currents, Red, $\frac{1}{2}$ chest.....	2 50 @ 4 00
Gooseberries, common, $\frac{1}{2}$ lb.....	— @ —
Gooseberries, English, $\frac{1}{2}$ lb.....	— @ —
Grapes, Thompson's Seedless, $\frac{1}{2}$ crate.....	1 25 @ 1 50
Grapes, Fontainebleau, $\frac{1}{2}$ crate.....	75 @ 1 00
Raspberries, $\frac{1}{2}$ chest.....	3 00 @ 5 00
Logan Berries, $\frac{1}{2}$ chest.....	— @ —
Nectarines, Red, $\frac{1}{2}$ box.....	50 @ 75
Nectarines, White, $\frac{1}{2}$ box.....	35 @ 50
Nutmeg Melons, $\frac{1}{2}$ crate.....	1 25 @ 1 75
Plums, ordinary varieties, $\frac{1}{2}$ box.....	25 @ 50
Plums, fancy, $\frac{1}{2}$ box.....	50 @ 65
Tragedy Prunes, $\frac{1}{2}$ crate.....	35 @ 50
Peaches, $\frac{1}{2}$ box.....	35 @ 50
Peaches, wrapped, $\frac{1}{2}$ box.....	60 @ 75
Pears, Bartlett, $\frac{1}{2}$ box.....	50 @ 1 00
Pears, common kinds, $\frac{1}{2}$ box.....	35 @ 75
Figs, Black, $\frac{1}{2}$ double layers.....	50 @ 75
Figs, single layer box.....	35 @ 60
Strawberries, Longworth, $\frac{1}{2}$ chest.....	2 50 @ 5 00
Strawberries, Large, $\frac{1}{2}$ chest.....	2 50 @ 4 00
Whortleberries, $\frac{1}{2}$ lb.....	5 @ 7
Watermelons, $\frac{1}{2}$ crate.....	3 00 @ 4 00

## DRIED FRUITS.

Conditions in the market for cured and evaporated fruits have not changed materially since date of last report. The leading feature continues to be the active demand for choice Apricots in the filling

of back orders, and for this purpose  $\frac{1}{2}$  lb. in the sweat boxes is being paid for desirable stock, such as is in no danger of being turned down or rejected on delivery. Common to fair qualities are obtainable at  $\frac{1}{2}$  @ 5c. in the sweat boxes, but present inquiry is mainly for choice at the higher rate. Prospects are for a weak market throughout the season for low grade Apricots, while offerings of choice to fancy are not likely to prove excessive. Peaches of this season's curing are already on the market, the initial lot of about 3,000 lbs. having been received early this week from Vacaville section. These Peaches are of the St. John variety and show fine quality. New Nectarines and Pitted Plums have also put in an appearance in small quantities, but values have not yet been determined for these fruits. The market for choice Peaches in this center will probably open at  $\frac{1}{2}$  @ 6c. Choice are being offered in sacks at primary points and in carload lots at 5c., August delivery. Quotations below noted are, with the single exception of Apricots, for last year's fruit, and values for the latter are largely nominal, with light stocks and scarcely any movement. Prunes are receiving some attention, with only medium sizes obtainable and not many of these offering. Demand is mainly for local and coast trade, and for this purpose and in a jobbing way the market is firm at the quotations noted. Prices for new crop Prunes have not yet been announced.

## EVAPORATED OR BLEACHED.

Apricots, Royal, in sacks, $\frac{1}{2}$ lb.....	6½ @ 7
Apricots, Royal, fancy.....	— @ —
Apricots, Moorpark.....	— @ —
Apples, in 50-lb boxes, rings, pressed, fancy.....	5¼ @ 5½
Apples, 50-lb boxes, rings, pressed, good to choice.....	4 @ 4½
Figs, White, fancy pressed.....	5½ @ 5¾
Peaches, unpeeled, good to choice.....	4½ @ 5¼
Peaches, unpeeled, fancy.....	6½ @ 7¼
Peaches, peeled, in boxes.....	12 @ 15
Pears, unpeeled Bartletts, halved, fancy.....	9 @ 9½
Pears, halved, unpeeled Bartletts.....	6¼ @ 7¼
Pears, quartered, unpeeled Bartletts.....	6¼ @ 7¼
Plums, Black, pitted.....	6½ @ 7½
Plums, White and Red.....	7 @ 8
Prunes, in sacks, 40-50s.....	4¼ @ 4½
50-60s.....	3¾ @ 4
60-70s.....	— @ —
70-80s.....	— @ —
Prunes in boxes, $\frac{1}{2}$ c higher for 25-lb boxes, $\frac{1}{2}$ c higher for 50-lb boxes.....	4½ @ 6
Prunes, Silver.....	— @ —

## COMMON SUN-DRIED.

Apples, sliced.....	3 @ 3½
Apples, quartered.....	3½ @ 4½
Figs, Black.....	2 @ 3
Figs, White.....	3 @ 3½
Peaches, unpeeled.....	3½ @ 4½

## RAISINS.

The only movement is in a small way out of stocks in second hands at irregular prices. Nothing doing in futures, and rates for coming pack have not yet been determined.

## CITRUS FRUITS.

Orange market is quiet, and it would be phenomenal to have it otherwise at this late date. Quotations are based mainly on asking figures. Lemon market has ruled fairly steady, more particularly for best qualities, the inquiry being mostly for choice to select. Limes were not offering quite so freely as for some time past, and tendency was to more firmness.

Oranges—Navels, fancy $\frac{1}{2}$ box.....	— @ —
Navels, good to choice.....	2 00 @ 2 50
Navels, common to fair.....	1 25 @ 1 75
Valencias.....	1 50 @ 2 75
St. Michaels.....	1 25 @ 2 25
Mediterranean Sweet.....	1 00 @ 1 75
California Seedlings.....	75 @ 1 50
Lemons—California, select, $\frac{1}{2}$ box.....	3 00 @ —
California, good to choice.....	2 00 @ 2 50
California, common to fair.....	1 00 @ 1 50
Limes—Mexican, $\frac{1}{2}$ box.....	4 00 @ 5 00
California, small box.....	50 @ 1 00

## NUTS.

Quotable values for Almonds and Walnuts are continued as before noted, but are largely nominal, as there are few offering and there is almost an entire absence of inquiry for old stock at this date. New crop Almonds for forward delivery are quotable at 9@11c. for the Hatch varieties, and 9@10c. is asked for futures of 1900 crop soft-shell Walnuts.

California Almonds, shelled.....	14 @ 17
California Almonds, paper shell, $\frac{1}{2}$ lb.....	10 @ 12
California Almonds, soft shell.....	8 @ 9
California Almonds, hard shell.....	4 @ 5
Walnuts, White, soft shell.....	9 @ 10
Walnuts, White, California, standard.....	7 @ 8
Chestnuts, California Italian.....	8 @ 10
Peanuts, California, fair to prime.....	5 @ 6
Peanuts, Eastern, hand-picked.....	6 @ 6½
Pine Nuts.....	5 @ 6

## WINE.

So far as reported or observable, the conditions of the wine market in this center are without change. There is little doing in a wholesale way and not much stock now remaining in first hands. For new dry wines 14@16c. per gallon continue to be the quotable range, representing figures obtainable from large dealers. For some 1899 wine in first hands 17@20c. is asked, but transfers at these figures are possible only in a comparatively small way

and for high grade stock going to special custom. This week's Panama steamer took 136,403 gallons and 94 cases wine, the greater portion, 134,684 gallons, being destined for New York.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, $\frac{1}{4}$ sacks.....	106,180	106,180
Wheat, centals.....	96,933	96,933
Barley, centals.....	26,950	26,950
Oats, centals.....	13,318	13,318
Corn, centals.....	30	30
Rye, centals.....	1,260	1,260
Beans, sacks.....	1,845	1,845
Potatoes, sacks.....	22,004	14,342
Onions, sacks.....	4,741	2,904
Hay, tons.....	2,987	1,471
Wool, hales.....	1,305	2,279
Hops, hales.....	1	70

## EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, $\frac{1}{4}$ sacks.....	69,600	69,600
Wheat, centals.....	125,925	125,925
Barley, centals.....	66,539	66,539
Oats, centals.....	—	—
Corn, centals.....	—	—
Beans, sacks.....	800	800
Hay, bales.....	1,980	1,980
Wool, pounds.....	—	—
Hops, pounds.....	3,249	3,249
Honey, cases.....	15	15
Potatoes, packages.....	1,040	1,040

## California Dried Fruit at New York.

NEW YORK, July 11.—Evaporated apples, common,  $\frac{1}{2}$  @ 5c; prime wire tray,  $\frac{1}{2}$  @ 5½c; choice,  $\frac{1}{2}$  @ 6½c; fancy,  $\frac{1}{2}$  @ 7½c. California dried fruits.—Market inactive, with a weak tone. Prunes,  $\frac{1}{2}$  @ 7c. Apricots, Royal, 11@14c; Moorpark, 15@17c. Peaches, unpeeled, 6@9c; peeled, 14@18c.

## Patrons of Husbandry.

## San Jose Grange.

On account of the very busy season being well on in the orchards, the attendance at the regular meeting of San Jose Grange on July 7th was not as large as usual. Steward C. D. Meder presided.

In a discussion, as reported by the Mercury, as to the fruit crop, it was learned that in many places both in the foothills and in the valley section the prunes were dropping badly and even alarmingly in some instances. When the trees are shaken lightly quantities of the fruit comes down, as it does when the crop is dead ripe.

In a comparison of notes as to the cause of the dropping, it was learned that the trouble was not always on account of lack of irrigation. The chief difficulty seemed to be a lack of proper and persistent cultivation. In many orchards in which there has been little or no irrigation since the winter rains, but in which thorough cultivation has been kept up, little or no dropping is noticed. It was agreed that winter irrigation is by far the best, and that warm weather irrigation without cultivation is almost certainly injurious.

State Master Worthen said that he had kept up his cultivation to date and that he intended to do so till August, or as long as the propping would not prevent the cultivator from getting close to the trees.

E. A. Hayes of Edenvale, who has just returned from the East for a short visit, stated that cultivation is being kept up persistently on his place with good results. The prunes are dropping little, if any.

It was reported that in some sections as high a percentage as one-half is dropping from the prune trees, and if this state of affairs continues the output will be materially lessened from what was expected a week ago.

The matter of co-operation among growers in buying and selling products that are raised in this county, such as hay and barley, was discussed and referred to a committee upon co-operation, a report to be made at the next meeting of the Grange.

LIVE OAK GRANGE is flourishing. On Saturday night six new members were initiated. Less than a year ago the lodge had but fourteen members; it now has fifty-six.

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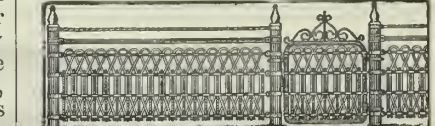
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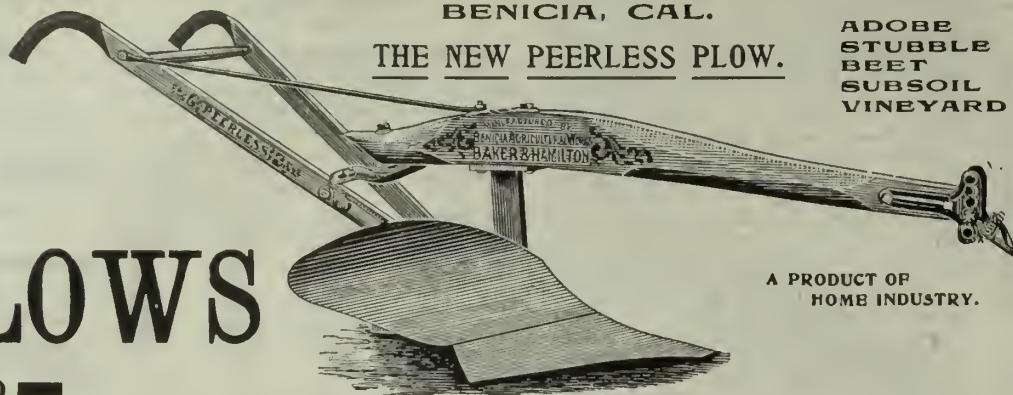
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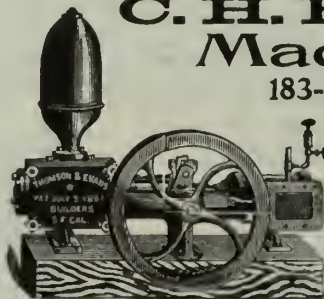
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 3.

SAN FRANCISCO, SATURDAY, JULY 21, 1900.

THIRTIETH YEAR  
Office, 330 Market St.

### Crystal Springs Lake.

Many of our readers are so deeply concerned in water supply for their various productive enterprises that they have given little thought to the water supply of the metropolis of the coast. It is perhaps a significant fact that so little is said about the water supply of San Francisco. If it were not so good, much would be said of it; and if it were not so ample, we certainly should have heard much about it during the last few years of short rainfall. San Franciscans have continually had so much and such good water that they have given themselves almost as little concern about it as they have about their supply of fresh air. It is a fact beyond controversy that, in both plenty of good air and good water, San Francisco is exceptionally well endowed. The air comes without the asking because of our splendid situation on a sea-girt peninsula in a climate of notable salubrity. The water comes without fail, because for the last forty-six years the city water supply has been continually increased by most enterprising investment and the highest engineering skill until very distant sources of excellent water have been progressively secured and developed for the city's use by the Spring Valley Water Co. It is an interesting reflection that, while other great cities of the world have for generations been struggling with the question of an adequate



Crystal Springs Dam in San Mateo County, Cal.

danger of a water famine. Some idea of its equipment to render this service we expect to give by a few views as we find space for them. One such group of views is presented upon this page, illustrating Crystal Springs lake in San Mateo county. The pictures give no idea of the area and capacity of the lake except as they may be inferred from the great engineering works which are shown. Miles of splendid water are impounded by the dam, which the engravings show. The utmost care is taken of the water and the sources whence it is gathered.

Crystal Springs lake is only one of several lakes, some others of which we may show later, but it exhibits traits which are characteristic of all in its substantial engineering, its great capacity and its cleanliness of maintenance and its beauty of environment. All these things are gratifying to the city consumer and of the highest importance to him. The surety that when he draws his draught from his silvered faucet it shall be wholesome, and that it is but a drop of the vast volumes which have been successfully stored, it is to him (if he is a thinking person) not only a matter of personal comfort and felicitation, but the surety of the city's health and the city's progress.



The Same Dam as Seen From the Lake.

supply of pure water, and many of them are still far from securing it, San Francisco almost from the founding of the city has been well supplied with water of exceptional wholesomeness.

We have thought it would interest many of our distant readers, and possibly many also who have themselves used the water for years, to have a few views and facts about the very interesting and diversified system which makes the product of many and distant watersheds tributary to the progress of a great city. We have no idea of going into the subject elaborately, but rather to present a few suggestive points which may contribute to a proper popular conception of the matter. The system includes hundreds of square miles of watershed, scores of miles of immense pipes connecting a group of large artificial lakes, without speaking of the immense storage and distributing arrangements within the city limits.

The experience of the past years has convinced the presiding intelligence of the Spring Valley Water Works that the company should have a storage capacity equal to a three years' water supply. The immense watershed, embracing the hills and valleys, reaching from Mt. Diablo to Mt. Hamilton, added to the several lakes and numerous reservoirs in the city proper and in San Mateo county, enables it to secure and hold an ample supply to meet all necessities of the city and avert all



The Overflow From Crystal Springs Lake.



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E. J. WICKSON, Horticultural Editor.

San Francisco, July 21, 1900.

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## The Week.

The great issue in China is still the ruling topic. Even in the midst of harvest and at the opening of a Presidential campaign, the anxiety about the foreigners in China and the sensational thought of a single nation defying all the world drive other themes from conversation. The new century will make a fair beginning to eclipse all the sensations of the old if it should show as its first scene all the nations hurrying to revenge or conquest on the fields of the celestial empire. Meantime work goes on apace in this peaceful corner of the globe. We shall have large totals of nearly all useful products, but none of them are likely to be a pound in excess of the requirements. Everything is going well. Although there is still a shortage of harvest help, the supply furnished by cities and towns is holding out well.

Wheat has dropped a little, both for spot and futures, in sympathy with a backward movement in Chicago, where the Northwestern shrinkage is said to have been somewhat overdrawn. Other things are happening which promise, however, to outweigh any such consideration, and holders of wheat are firm. Shippers are willing to buy moderately at current rates, but no one is urging them. Barley is fairly steady, with a good demand for bright, heavy grain for shipping. Oats are firm and unchanged. The Government is taking some and is expected to take much more. White corn is higher and scarce; yellow corn is firm. No Eastern corn is now coming, as rates there are too high for a margin. Hay is firm and higher, especially for choice. Buyers are said to be operating heavily in the country, and the Government is expected to figure in the local hay market considerably before long. Millfeeds are unchanged; supplies are ample. Beef and mutton are unchanged, and hogs are easier; there is no drop, but home-grown hogs are coming in more freely. Large veal is lower; small calves are scarce.

The best butter is firm; cheese steady and quiet, and eggs higher for choice selected, while others are in large supply and unchanged. Poultry arrivals are rather heavy and the stock not good; fine birds would go above quotations. Fresh fruits are in large supply. Dried apricots are in good demand, and even common grades are sought for; the whole market is firm. Other dried fruits are in small amount as yet. Lemons are firmer and stocks light, owing to the advance of limes. Dry beans are steady and unchanged. Potatoes are rather slow and unchanged; while just as we go to press onions show firmness through light receipts, though rates are not changed. Wool and hops are still non-committal. White honey is scarce, but considerable amber honey is in sight.

## Getting Timber Without Destroying the Forest.

This is the achievement of forestry science which will appeal most directly and strongly to the practical man—the man with investments to make profitable and trade to supply. If some one could teach the small boy how to eat his cake and keep it also, the rising generation would vote him the greatest discoverer of the age. The boys grown up in the form of owners of timber lands are also ready to honor and obey forestry science which will show them how to produce a profitable timber crop and still keep the forest perpetually productive. When this claim of forestry science is properly presented to those engaged in the great timber industries, they recognize that forestry is more than sentiment and poetry—that it is also capable of becoming a guide in industry and a method of business success. This fact was clearly shown by the very satisfactory conferences which our California lumbermen had with Mr. Gifford Pinchot, Forester of the United States Department of Agriculture, during his visit to California last summer. He won their interest and respect by his candor and his manifest mastery of his specialty, and they are, perhaps, the keenest approvers and most interested watchers of the work which is going forward this summer under Mr. Pinchot's direction in the redwood region of the northern coast counties of California, of which we shall no doubt have interesting reports in due time.

The importance of the general proposition and the localization of its application by the work now being done in this State warrant a reference to the progress of the effort in other States. After the New York State Legislature appropriated \$2000 for the State forest preserve, the New York Fisheries, Forest and Game Commission requested the Division of Forestry of the Department of Agriculture to examine its lands, and to submit recommendations for the management of the forests in accordance with the regulation for furnishing working plans to those who pay the field expenses of experts. Accordingly, the work of investigating the forest conditions in the preserve began in June, and the completed working plans are to be ready for submission to the New York State Legislature by the first of January, 1901. The beginning of this investigation marks an epoch in the forest history of the country. For the first time the Division of Forestry will co-operate in practical forest management with one of the State governments.

The situation in New York State is particularly interesting because there is in the Constitution of the State, adopted in 1894, a clause which now prohibits any cutting or utilization of the forest crop of the preserve. This clause was an amendment passed in 1894 through fear that if any lumbering were allowed, mismanagement would be inevitable. The attempt to repeal it in 1896 was defeated by the greatest majority that ever defeated a proposal to repeal in New York State. At that time, however, the State had no machinery for regulating the cutting in a scientific manner. If the apostles of forestry science can demonstrate to the satisfaction of the people that the proper way to preserve a forest is to intelligently use it, then the prohibition clause may be repealed and the Empire State may secure an income from its grand forests in the Adirondack region. If the final report should lead to the repeal of the forest clause of the 1894 amendment, a large public preserve will for the first time in our history be put under skilled forest management and operated with a view not only to its permanent preservation, but to the production of a regular revenue.

It is widely interesting to note how the forestry division of the Government will approach this great proposition. The working plans for which the data are now being gathered will amount to a detailed scheme for managing and harvesting the forest crop of an important section in the preserve. They will show whether or not a steady revenue can be drawn from the New York preserve without diminishing its timber yield in the future, and whether it is necessary or not to prohibit all cutting whatsoever in order to preserve the forest.

Their preparation will involve, first of all, an examination of the forest itself with a view to finding out what timber there is now on the ground, in quantity as well as in kind; and, secondly, a thorough study of the possibilities of lumbering on a sound

basis; or, in other words, an examination of the forest trees from the lumberman's point of view, and of the most profitable methods of marketing the timber. Thirdly, it will necessitate a thorough investigation of the fire problem, taking into consideration not only the best means of preventing fires in the future, but also those of dealing now with lands which have been injured or devastated in the past; fourthly, the preparation of forest maps, and, lastly, an examination of the forests in their relation to the water supply of the region, and of the importance of preserving them as natural reservoirs, and for other reasons than those involved in the immediate production of revenue. This part of the investigation, to be taken up in collaboration with the hydrographer of the U. S. Geological Survey, will dispose effectually of any danger to the water supply from the proposed cutting, and will fix all those areas which must be totally protected, or which will require particularly careful and conservative treatment.

This is the sort of investigation which all the forests of the country should receive, and the present generation should promote the effort effectively for present advantage and for posterity.

THE old trouble over contract deliveries at the canneries not holding up to size stipulated is running high in Alameda county. The Oakland Tribune says: "Wagonloads of fruit, peaches and apricots, have been dumped at the canneries, only to be turned back to the growers after tests which, it is claimed by the canners, showed the fruit to be undersized. Much fruit was picked on the assumption that it would run twelve to the pound, the contract standard, but upon grading at the cannery the fruit would not hold out. It would go from thirteen to fourteen to the pound and would be rejected. The growers claim that this is A1 fruit and should be accepted. Another grievance of the growers is that extra-sized fruit, running eight to the pound, is being paid for by the canners at \$20 a ton only. The orchardists claim they should receive \$25 for this grade." This is all very vexatious. There does not seem to be any remedy except to have a better understanding beforehand as to just what will happen, and then stand up to it in a business way on both sides. Canners are sometimes exasperating when they have struck too high a mark in their contracts, and growers cannot understand the motive.

THE contest for mastery of the California wine trade is proceeding briskly and bids fair to make the skies very bright for growers who have wine grapes to sell. There are now three large business houses which control the wine trade (as the Wine Makers' Corporation is out of the field) and there is competition for wine grapes, especially as the product bids fair to be considerably lessened by heat above and drouth beneath in some districts. The Chronicle says that the agents of these three wine houses are already out in the wine districts preparing to secure supplies for their wineries and cellars, and talking over prices to be paid this season for the grapes. The growers, aware of the situation, are very firm in their demands, asking \$18 and \$20 a ton for their grapes, which price, the writer says, "will prevent the merchants from selling the coming vintage at a profit, and probably entailing a loss upon them." That would be too bad, after all the money they are spending and the effort made to control the trade!

ANNOUNCEMENT is made that the California Raisin Growers' Association has secured the requisite 90% of the acreage signatures to the three years' contracts. The new agreement includes growers and packers, and is for the seasons of 1900, 1901 and 1902. It is really an extension, or rather a welding on, of two years to the original term of association that would have expired with this year's crop, combined with features more satisfactory to the packing houses.

W. P. CRAGIN has been chosen to the vice-presidency of the Cured Fruit Association to fill a vacancy caused by the resignation of Mr. Henry. Mr. Cragin has been prominently identified with the movement for the organization of the prune interest and is president of the San Jose Farmers' Club. He is a man of great energy and tact and may be depended upon to render the Association notable service.



## QUERIES AND REPLIES.

### Squirrel Killing.

TO THE EDITOR:—Possibly owing to the last three dry years, squirrels, "kangaroo" ground rats, gophers and similar rodents have increased in large numbers, consuming large quantities of wheat and forage. We desire particularly to kill the squirrels, and have heard that a new method by inoculation (catching one out of each "colony") has been devised. Is this so and is it a success? If you can not recommend this, which is the best poison? Also please give method of preparation and formula for mixing.—NEWCOMER, Santa Barbara county.

Though the methods are familiar to older readers of the PACIFIC RURAL PRESS, there are many newcomers who may be edified by a brief recital. There are two ways in which destruction of squirrels is accomplished—one for the dry part of the year and another for the times when the soil is moist. During the dry season poisoning is the proper recourse, and the following formula for squirrel poison has been found satisfactory. It is very effective indeed when faithfully used.

Strychnine 1 oz., cyanide of potassium 1½ ozs., eggs 1 doz., honey 1 pint, vinegar 1½ pints, barley 30 lbs. Dissolve strychnine in the vinegar—and you will have to pulverize it in the vinegar, or it will gather in a lump. See that it is all dissolved. Dissolve the cyanide of potassium in a little water. Beat the eggs. Mix all the ingredients together thoroughly before adding to the barley. Let it stand twenty-four hours, mixing often. Spread to dry before using, as it will mould if put away wet. In wheat districts use wheat and in barley districts use barley, as they eat it better. Look out for your poultry and stock.

During the winter season the most effective treatment is the use of the carbon bisulphide. This is a liquid, now made in large quantities in this State, and for sale at reasonable rates by nearly all country store-keepers. It is a liquid which evaporates rapidly in the air, the heavy vapor flowing down quickly and completely filling the burrow of the squirrel, destroying every kind of animal life which it contains.

The method of destroying squirrels by inoculating one of each colony with the virus of a contagious disease has not yet been fully proved by experience. Contradictory results were reported by different experimenters. We understand that the manufacturers are still experimenting with the virus, hoping to give it satisfactory form. At present the poison and the bisulphide constitute the best recourses.

### Resistant Apple Roots.

TO THE EDITOR:—Can you tell me how I can obtain 5000 Northern Spy roots for grafting apples? Are there any in the United States?—GROWER, Watsonville.

It is possible since so much interest has been manifested in resistant apples that some one has produced Northern Spy roots in quantity, but we have not heard of it. We doubt if they can be obtained in any such amount in this country. You can get supplies in any quantity from D. Hay & Son, nurserymen, Auckland, New Zealand. In their catalogue they say that the Northern Spy is the only one which was used. They undoubtedly propagate them in large quantities. Another nurseryman who also uses Northern Spy stock exclusively is John Williams, Broadwater Nursery, Mt. Gravatt, near Brisbane, Queensland, Australia. No doubt other Australian nurserymen also have them, but we do not happen to have their names. We are sorry we can not give you references nearer home, but the fact is the Australian people seem to have pursued this matter to a demonstration, while we have been asleep to it for many years.

### Repellant for Rabbits.

TO THE EDITOR:—In "California Fruits" you recommend sprinkling trees with a solution of aloes—one pound to four gallons of water—to keep off rabbits. I am trying this and wish to know how frequently I should repeat the sprinkling. If there should be anything else that would more effectually prevent the onslaught of these pests please let me know what it is. I've tried strychnine on apples, but they don't eat the apples. Perhaps I may use too much strychnine.—READER, Corning.

The application of aloes to the bark of the fruit trees will only need to be repeated at long intervals in this climate, where there is no summer rain to wash it away. We do not know that any accurate observation has been had to test the duration of this

application. You will have to determine for yourself by testing a small piece of the bark by tasting it for aloes, which, as you know, is intensely bitter. Rabbits are very "curious critters," and if some succeed very well in poisoning them others fail. It takes considerable experience and acuteness to deal with them. Smearing the stem of the young tree with the opened body of a rabbit shot for the purpose has received very wide endorsement. It leaves a rank smell, which the cleanly pest abhors.

### Watermelon Disease.

TO THE EDITOR:—I send you a diseased watermelon vine. Vines thus affected die suddenly and without apparent cause.—SUBSCRIBER, Lodi.

The case seems on casual examination to be one of the "wilt disease," which causes the collapse of the vine even when apparently in good vigor and with conditions favoring growth. This is quite a prevalent trouble with the watermelon in the Southern States, and is encountered now and then in this State. A very careful study of the subject has been made by Erwin F. Smith, pathologist of the division of vegetable physiology and pathology of the U. S. Department of Agriculture, and he has just made a very elaborate publication on the subject, mainly in its scientific aspects. Practically it may be said that the collapse of the vine is due to a fungus which comes from the soil and may remain in the soil for a long time. This fungus attacks the sap vessels of the plant and the wilt is caused by the fact that the water ducts are closed to such an extent that they cannot perform their function. Sometimes in a region of summer showers the plant may recover for a time, if the air becomes so moist as to check transpiration, but collapse again when the air becomes dry. In the dry summer air of California transpiration is continuous and the wilt proceeds into desiccation. There is no remedy known for a fungus which passes to the soil to the interior of the plant. The recourse is a change of soil—giving infected ground to other crops, perhaps for several years, and seeking new ground for the watermelon. The reduction of the infection of the ground and perhaps the saving of healthy plants suggests the quick burning of all plants which show the wilt, pulling them out by the roots at once and not allowing them to dry and go to pieces and carry the masses of fungus spores which they contain to the soil. We have not heard of much of this trouble in California, and shall be glad to have observations of readers upon it.

### The Dreadful Diabrotica.

TO THE EDITOR:—The diabrotica have been doing considerable damage around here on the fruit and, some claim, on the alfalfa. They have damaged the ripening fruit very much and are now working on the melons. There seems to be a general opinion among the fruit growers that something ought to be done to prevent their becoming more plentiful. Can you recommend anything that the people can do to rid the orchards and gardens of this pest? Any suggestions that you may give us will be received with pleasure, for if they are not stopped this part of the State will be no good for fruit.—READER, Madera.

We are very sorry that we cannot give you any satisfactory suggestion as to the treatment of the diabroticas. All efforts at poisoning or otherwise destroying them have been ineffectual. They can be driven away temporarily by smoke, as has already been stated in this column. Beyond this we know of no treatment which has been employed with any satisfactory results. It is a fortunate fact that they are very seldom abundant, year after year, in the same place, but are destroyed very rapidly by some agency which is not understood. Many parts of the State have suffered in turn by this pest and people have felt, as our correspondent does, that the diabrotica will destroy the country, but they disappear after once reaching great abundance. It is too bad that the great losses by this insect cannot at present be prevented, but it is some consolation that it is never bad year after year.

### Budding and Grafting.

TO THE EDITOR:—I have a few seedling apricots and almonds that I wish to bud. What would do best on them? Will the Japan plums grow a strong union? Should scions when cut in the fall be sharpened ready for packing for spring use?—READER, Salinas.

We should put apricots on the apricot roots and almonds, peaches or prunes on the almond roots.

Will some one else give his experience with the behavior of Japanese plums on these stocks? Scions should be packed away without shaping and should be good long shoots, each of which will make several scions. When the grafting is done the scion should be freshly cut to shape. It is not necessary to put away scions as early in California as in cold climates. Leave them on the trees as long as you like, provided they are taken off before the buds swell for new growth. They are safer on the tree than in packing.

## WEATHER AND CROPS.

### Report of the U. S. Weather Service for Week Ending July 16, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

#### COAST AND BAY SECTIONS.

Favorable weather has prevailed during the week. The potato blight is proving quite destructive in Humboldt county, and beetles are doing some damage to potatoes in Sonoma county. Corn and beets are looking well. Hop vines are reported as very scattering in some places, and the crop will be light. Figs in Lake county are looking remarkably well and a good crop is expected. Grape vines are making a healthy growth, and, with favorable conditions, will yield an average crop. Peaches in Sonoma county are not maturing properly. Prunes are dropping badly in some places, but in other sections the crop is heavy and in good condition. Harvesting and thrashing continue. Barley will be a light crop. Pasturage is good.

#### SAN JOAQUIN VALLEY.

The weather has continued clear and warm, and very favorable for all crops. Harvesting and thrashing have progressed rapidly during the week, and in many places wheat harvest is completed. Reports from nearly all sections state that the yield of wheat is falling below expectations, and that barley is also very light. The late sown grain is inferior to the earlier sown. Wheat and barley are generally excellent in quality. Alfalfa is making good growth. Water in the ditches is plentiful. Deciduous fruits are being disposed of as soon as mature. Bartlett pears, peaches and plums are yielding well. Grapes are in good condition.

#### SACRAMENTO VALLEY.

Conditions have been favorable for farming operations during the week. Harvesting and fruit gathering continued without interruption. The wheat crop will fall considerably below early estimates. The yield per acre is not up to the average, and the acreage is comparatively small, owing to the long-continued spring rains, which prevented the sowing of grain in many places. Barley is also below the average in yield, but will make a fair crop. The quality of wheat and barley is excellent. Deciduous fruits in many places are yielding better crops than estimated; peaches and pears are being shipped in large quantities, and there is a heavy crop of prunes in some sections. Peach drying has commenced. Vineyards are thrifty, and a large crop is probable. Oranges and olives are looking well.

#### SOUTHERN CALIFORNIA.

Warm, dry weather has prevailed during the week. Irrigation water is still plentiful in some sections, but is reported low in Orange county. Grape vines are looking well and making favorable progress. The yield of apricots is less than was expected. Berries and melons are abundant. Orange trees in the vicinity of San Diego are now laden with blossoms and green fruit. Heavy shipments of lemons continue. Walnuts on irrigated lands are making good growth and give indications of at least an average crop, but will be nearly a failure on lands not irrigated.

LOS ANGELES SUMMARY.—Cool, foggy weather in some sections has been favorable for growing crops; warm with little fog in others, where beans begin to show lack of moisture. Apricot drying is progressing finely. Water is holding out well in some places; getting scarce in others.

EUREKA SUMMARY.—It is expected that blight and rust in many localities will cause considerable decrease in yield of potatoes and oats. Fruit generally continues promising, especially apples and second crop of strawberries.

#### Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, July 18, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Minimum Temperature for the Week.....	Maximum Temperature for the Week.....
Eureka.....	.00	T	.00	.06	50	62
Red Bluff.....	.00	.00	.00	.02	66	104
San Ramon.....	.00	.00	.00	T	56	94
San Francisco.....	.00	.00	.00	.02	48	70
Fresno.....	.00	.00	.00	T	108	80
Independence.....	.00	.00	.00	T	68	100
San Luis Obispo.....	.00	T	.00	T	48	92
Los Angeles.....	.00	.00	.00	.02	58	92
San Diego.....	.00	.00	.00	T	64	76
Yuma.....	.00	.00	.00	.10	72	110



## HORTICULTURE.

### Lemons Profitable.

This year has been very satisfactory to those who have bearing trees in places where they do well. As we stated in connection with a good illustration of the chief lemon region of San Diego county, which we published in the *PACIFIC RURAL PRESS* last winter, that county claims to have now more than two-fifths of the lemon acreage of the State and a total of about half a million trees. An uplift of the lemon comes therefore with good force in our southernmost county, and the lemon growers are quite emphatic in their comments upon it. The San Diego Union last week followed the matter up and secured many interesting statements.

**A PACIFIC BEACH LEMON MAN.**—One of those who spoke most encouragingly of the industry was F. W. Barnes, who is one of the prominent growers, packers and shippers of Pacific Beach. He said that the business is now on a paying basis and that the experimental stage, in which the industry has been for a number of years, is past. "The people have learned how to properly grow the fruit," he said. "They know how to take care of the trees, how to irrigate, cultivate and fertilize, and consequently the product is of a better quality than was at first obtained. In the East the lemons are preferred to the foreign fruit because they have more acid and are juicier. The demand for California lemons is constantly increasing, and I think it will continue to do so. Our output this summer is larger than it has ever been before, and yet we have had no trouble in marketing the fruit. The people in the East are consuming more lemons each year; it is getting to be a sort of habit, and it is a good thing for the growers here."

"Another factor which has helped to put the industry on a paying basis is the increased production of the trees. As the trees grow older they bear more fruit, and consequently become more profitable. Then there are more trees coming into bearing which have heretofore yielded nothing."

"It is my opinion that we have the best country in the world for growing lemons, the soil is better and the climate agreeable. That is why we can produce superior fruit. Our only disadvantage is that we are so far from our market, making it necessary for us to pay high freight rates and depriving us of some of the profit that we ought to have. When the Nicaragua canal is constructed this will be overcome, and we can get our fruit to the Eastern markets at a comparatively low cost. We can then compete more favorably with the foreign growers, who pay cheap ocean freight rates on their fruit."

**IN THE SWEETWATER.**—Another man who has made a success of the lemon business is R. C. Allen, proprietor of Bonita ranch in the Sweetwater valley, and one of the largest individual lemon growers in the county. The efforts of Mr. Allen have been rewarded, and he is now assured of a good annual income from his ranch. This year his crop amounted to nearly 20,000 boxes; and, if a box were sold for as low as \$1.50, this would bring in \$30,000. But lemon prices are higher than that now.

Mr. Allen's crop this year was twice as large as last season, and the output will fast increase as the trees grow larger and more come into bearing. To the question, Does the lemon industry pay? Mr. Allen gives a very decided affirmative answer, but says that certain things are necessary, among which is a knowledge of how to take care of the trees.

"There is no longer any doubt about the success of the lemon industry in this county," said Mr. Allen recently. "The people are past the doubtful stage and are making money. This has been very completely demonstrated this summer by the large output and the increased demand in the East for California lemons. The Eastern people are becoming more favorable to our fruit, and there is no reason why we should not control their markets. This summer there has been a bigger demand for California lemons than ever before, and we can expect this demand to increase year by year."

"There is always a good market for good fruit, and if the growers of this section would raise no other kind, they would have no difficulty in disposing of their crops at a good profit. To make good lemons, irrigation must be plentiful and regular. Spasmodic irrigation will not do. Another factor which is too frequently overlooked is the matter of fertilization. Many people do not care to stand that expense, but I have found that it will repay in the end. There is only one way of taking care of lemons, and that is the right way. The growers who do not fertilize, irrigate and cultivate properly are the ones who make a failure of the business and can see no good in the industry."

"Many of the growers have been at a disadvantage for a year or two past on account of the shortage of water; but despite this fact, they have made money this summer from their fruit. I think the outlook for the industry was never brighter than it is to-day. The most of us knew very little about the business when we started in, but we have learned by experi-

ence and are now on a solid and firm basis. I would advise my friends to go into the lemon business because I think it would pay them."

**A LEADING SHIPPER.**—R. H. Young, one of the leading lemon shippers of this section, has great faith in the future of the lemon. In speaking of the increased demand in the East for California lemons, Mr. Young said that the importations for some reason or other were considerably lighter this season than in former years, and southern California had to supply the deficiency. "The country seems to be in a prosperous condition," continued Mr. Young, "and the masses are able to buy lemons, hence the fair prices. We are only prevented from getting full value by reason of the fact that the fruit has not kept so well as it should."

"During the past two months the shipments have been much larger than ever before, and the supply for the next two months is larger than it has ever been for the corresponding time of the year. Taken altogether, the lemon industry is in a very satisfactory condition for all parties concerned. Outside of the decay, California lemons are making a very favorable impression in the East. They are juicier and have fewer seeds, and are therefore more desirable. The orchards are now in a good condition, and with a satisfactory rainfall this winter the yield next year will be very large. I know of twenty carloads that will go out by rail this week, and there will be more by steamer."

### The Fruit Drop.

**TO THE EDITOR:**—We have carefully gathered reports from members of this Association during the past week concerning the effect of what is known as the "June drop" on the growing fruit crop, especially prunes. Our reports are especially complete from this county (Santa Clara), which furnishes three-fifths of the prune output of the State, and convinces us that the severity of the "drop" is unparalleled in recent years. Reports indicate that the drop will reduce the output 10% to 20% from previous estimates. The drop seems to have been more severe in this county than in the State outside. In some orchards nearly all the prunes are dropping from the trees.

The causes of the severe drop are: first, the hot spell that came just at the critical period; second, the lack of moisture in the subsoil as a result of the light rainfall for the past few years. Only a few orchards have escaped. Prunes slightly affected by the spring frost remained on the trees until the hot wave came.

The effect on the peaches and apricots has been to ripen them prematurely, thus diminishing their weight and size. The peaches are also drying out heavily on the trays. This will lessen the total output considerably.

CALIFORNIA CURED FRUIT ASSOCIATION.

San Jose, July 12.

### Pruning for Good Prunes.

We are interested in seeing that rational pruning of the prune tree is constantly commanding wider attention. It is one of the most obvious lessons of recent experience. L. W. Parsons of Campbell, Santa Clara county, writes to the Chronicle concerning the present state of mind in his region:

**THE LESSON.**—We fruit growers are learning some valuable lessons by watching the results of the scanty rainfall of the past three years. When a man passes through a severe ordeal of suffering and exposure his points show themselves. It has been so with our orchards. The various methods of culture and no culture have been pretty well tested. The behavior of our prune trees has thrown much light on the subject, especially in regard to pruning.

**EVOLUTION OF OPINION.**—There have been two opposite systems in vogue, which may here be considered. In the early days of our business—say fifteen years ago—it was a common practice to cut back very severely, and to continue heading back and thinning out until the trees were in full bearing. This method, while making vigorous trees, retarded their bearing, and so many went to the opposite extreme, and refused to cut at all after the first two or three years. This method gave a great mass of slender branches, which were overloaded with fruit and broke down the trees or were bent out of shape. Such trees bore fruit fairly well for a few years, but stopped growing before attaining full size, and the fruit became smaller and tough.

**DIEBACK.**—During the past five years or more there has gradually been developing what appears to be a new disease, which has come to be known as "dieback." Early in summer the tips of the prune branches stop growing; the leaves, only partly developed, turn pale and yellow, and in the fall the wood dries and finally dies. This has increased year by year, large limbs succumbing and here and there whole trees giving up the struggle.

The trouble is more prevalent among unirrigated orchards, which suggests at least one of the causes.

Spraying with Bordeaux mixture has given little or no relief. Fertilizing has helped to some extent, but without plenty of water fertilizer can not do much good. Several old orchards have been severely topped back and have made a new and healthy start. Their future development will be carefully watched. These observations lead to the following conclusions:

**A RATIONAL CONCLUSION.**—We can not expect prune trees to make wood ad libitum and make a full crop on the same without heavy fertilization and an abundance of water. But even under the most favorable conditions and with the most generous treatment it is impossible for a prune tree to develop all the fruit on such a mass of branches as it produces when left to its own natural course. Something must suffer. Either the fruit will be small and tough or most of it will drop or the wood will stop growing and gradually die back.

It has become clear to many of us that we must reform in our methods of pruning. To get the best results it is necessary to allow the trees to carry only enough wood to bear a crop proportioned to its size and ability. It is safer to leave too little wood than too much, because we would get at least good fruit. Cutting some every year is better than cutting heavily every two or three years, so as to save taxing the tree to make so much firewood.

**PROPER BURDEN FOR THE TREE.**—We should remember that in pruning we are thinning the fruit, which is the only practicable way with prunes. With other fruits, if we find that too much fruit has set, we thin by hand; but not so with the prune.

So, then, to sum up the situation, it is best for the vigor and productiveness of our prune trees that they should be pruned every year, more or less, from the time of planting and as long as they are fit to live, or the tree or fruit will deteriorate. This is especially true in light soil and where irrigation is impracticable. Heading back one year and thinning out the next, and so on alternately, is a good plan. Careful pruning may prevent to a great extent the heavy dropping so common in spring time.

Suppose a tree full of branches puts forth 10,000 blossoms and has strength enough for only one-fourth that many prunes. A division of plant food must follow, allowing only one-quarter ration to each embryo fruit. All must go hungry and are weakened. A struggle ensues and only the strongest survive, the rest dropping.

On the other hand, if only enough wood were left to bear a reasonable number of blossoms, most of them would be well nourished and grow. The same principle holds good in the fall, when buds are being formed for the next year. Of course, frosts and other climatic accidents account for much of the dropping, but a careful pruning will be likely to prevent most of this trouble.

## AGRICULTURAL ENGINEER.

### Grades on Country Roads.

W. W. Carson, Professor of Civil Engineering, University of Tennessee, has prepared a very suggestive abstract of his investigations on the location of country roads which our readers will find very interesting. It is now appearing, he says, more clearly every day that a judicious use of the road tax is one of the great factors that have to do with the advancing of a community in wealth. It is extravagant to build a road with a surface costly enough for heavy hauling, but with grades too steep for any but the lighter loads. To harmonize is to economize. So it is worth while to seek for harmony between the grades and surface of a road. In this inquiry hair-splitting accuracy, which interests nobody but the theorist, will be avoided. And, as becomes serious men in considering an important subject, no greater accuracy will be indulged in than has to do with dollars and cents.

How hard a pull a horse should deliver to his traces depends on the horse himself, on the speed, and on the length of time he works. For very heavy hauling the speed must, of course, be a moderate walk. The average horse in this southern country can not deliver a pull of more than 90 pounds to his traces, for any considerable time, even at a walk, without hurtful overexertion. Thus, 180 pounds is quite as much of a pull as should regularly be required of an ordinary pair of horses in the South. But it must be noticed that this is the pull on the traces, and not the weight of the load.

Next it must be observed that the pull needed to draw a given load depends on the grade and on the roadway; for we shall tacitly ascribe to the last, or ignore resistance from other sources. The roadway always opposes the motion, whether uphill, downhill or on a level, with a force of many pounds per ton of gross load hauled. The amount of pull thus exacted depends on the character and condition of the roadway. Practically, it is not affected by any ordinary grade. Line A of the table shows how much it is on the average for roads of the kind given when in good condition.

The effect of the grade is to pull against motion uphill, but with motion downhill. A given grade pulls



each ton of gross load with a force of just so many pounds, and this does not depend in any wise on the roadway. The third column of the table shows how much this pull is for the grades given.

While ascending, the horses must exert the pulls called for by both roadway and grade. Thus, a sand roadway calls for 400 pounds per ton, while steel calls for 10 pounds. A 20% grade calls for 392 pounds. Hence, the pull needed to draw one ton up such a grade is 792 pounds on sand, but 402 on steel. In the same way, it may be seen that pulls of 460 and 70 pounds, respectively, are needed in ascending a 3% grade on sand and steel. In like manner the pulls can be compared for any grades and roadways given in the table.

Now notice what these figures mean: On a level a horse can draw forty times as much on steel as on sand; on a 3% grade, less than seven times as much; on a 9% grade, about three times; while on a 20% grade, barely two times as much. If we compare steel with macadam, we shall see that on a level a horse can draw six times as much on steel as on macadam; on a 3% grade, 1 1/2 times as much; while on a 9% grade, only 1 1/4 times as much. Thus, a road of high class has little advantage over one of lower class if the grades are heavy.

As already pointed out, the pull of the team while ascending is divided into two distinct parts. The part spent in overcoming the resistances of the roadway is entirely lost. But the part that overcomes the downward pull of the grade is not lost, but is simply spent in accumulating work for future use. The amount of this last, per ton of load, is a definite quantity for any given vertical ascent, and can not be increased or diminished in any way whatever. Every bit of it is recovered on the descent, as we shall see. If not recovered too fast, it all goes to relieving the team. But, if recovered too fast, the excess is wasted by the brake, or the team has to undo it by the additional work of holding back.

In the descent the grade pulls forward and the roadway holds back with the amounts per ton of load already pointed out. So long as the pull of the grade does not exceed the resistance of the roadway there is no waste. The team pulls with a force equal to the difference and gets more or less relief at every step. But when the grade pulls harder than just enough to overcome the resistance of the roadway the brake must be used or the team must hold back, and waste results. This shows that there should be a definite limit, different for each kind of roadway, to the steepness of a grade. How different these limits should be may be seen from the table. Thus for sand, which offers a resistance of 400 pounds per ton, a 20% grade, which pulls with 392 pounds, is somewhat below the limit. But such a grade on steel, which only opposes 10 pounds, would give an excess of 382 pounds to be wasted by the brake. It will be seen from this table that one-half of 1% is the limit for the grade on steel. Extending the examination to the other roadways, we see that to avoid waste on the descent no grade should be steeper than 20% (about), 9%, 3%, or 1%, respectively, on a sand, dirt, macadam or steel roadway. It now remains to see whether conditions connected with the ascent demand the lowering of these limits. In the first inquiry we had for guidance well-known facts from mechanics, and figures from the dynamometer. But in this second inquiry we must be guided also by human judgment. But this is based on much experience and is singular in its unanimity. It is the unanimous opinion of men who have had to do with horses, so far as the writer can learn, that two horses may, without harm, haul as great a load for a little while as four horses should for several hours, but no greater. In other words, a horse may properly, in an emergency, be required to put forth double his usual effort, but no more. Hence the pull added by an ascending grade should not exceed the resistance offered by the roadway. From the table it will be seen that this places the limit of 20% (about), 9%, 3% or 1%, respectively, on the steepness of grades to be used on a sand, dirt, macadam or steel roadway. It should be noticed that these limits for ascent are precisely the limits previously found for descent. So long as the grades of a given road are not steeper than the limit thus pointed out for a roadway of its character, the horse may haul a load every whit as heavy as if the road were absolutely level. The total amount of work he would do in making the round trip would be precisely the same. He would work harder than usual, though not too hard, on up grades, but would get full compensation for this on down grades. Line B of the table shows the proper gross loads in tons (of 2000 pounds) for a pair of horses (capable of pulling with a force of 180 pounds for several hours) on roads whose grades do not exceed these limits. The figures below line B, in the last four columns of the table, show the number of pounds of pull or holdback needed to handle these loads on the grades shown. The figures above the heavy horizontal lines are holdbacks, those below are pulls. A study of these figures will instruct and interest, and show the folly of using a grade which is out of harmony with the character of the roadway. But one point should be noticed. A so-called macadam road, in which clay is used as a binding material, may, in reality, be little less than a dirt road. A grade, therefore, somewhere between 3% and 9%, depending, of course, upon the amount of such binder

used, would harmonize with such a roadway. Attention should also be called to several other facts. The location of a road must often be determined, in a large measure, by the material to be used in the roadway, since this must determine the grades. Thus a sand roadway, with admissible grades of 20%, would properly go over hills and hollows on lines that it would bankrupt the State to bring to the grades called for by steel. Before macadamizing a dirt road the grades should be properly reduced, which will often mean a change of location here and there. The location of a new road should be made with reference to the character of roadway to be adopted ultimately, and the ultimate grade lines should be decided on at once. The idea of ultimate conformity to these should be kept in mind while putting on the grade lines adapted to the temporary surface.

It should be remarked, in closing, that while gentle grades may call for more or less of winding they do not, of necessity, call for much in the way of cuts and fills. But they do call for a good engineer. The trifling increase in length of road due to these windings is generally more than compensated for—in time by the greater speed which the gentler grades allow to the higher traffic, and in money by the reduced rain wash. Finally it will, without doubt, be necessary to sacrifice transportation interests sometimes to cost of construction, right of way, etc., and thus to exceed the above grade limits. But this should not be done without grave reason, and without full recognition of the fact that it will impose a daily tax, for all time, on an ever-increasing population.

		Grade, Per Cent— That is, Rise or Fall Per 100	Number of Pounds Per Ton Pulled by the Grade	* Resistance of Roadway			
				Sand	Dirt	Macadam	Steel T'ramway.
DESCENDING.	A	.....	.....	400	180	60	10
	B	.....	.....	0 45	1	3	18
	.....	20	392	4	212	996	6876
	.....	15	297	46	117	711	5166
	.....	12	239	72	59	637	4122
	.....	9	179	99	0	357	3042
	.....	6	120	126	60	180	1980
	.....	3	60	153	120	0	900
	.....	0.5	10	.....	.....	.....	0
	LEVEL.	0	0	180	180	180	180
ASCENDING.	.....	0.5	10	.....	.....	.....	360
	.....	3	60	207	240	360	1360
	.....	6	120	234	300	540	2340
	.....	9	179	261	359	717	3204
	.....	12	239	288	419	997	4482
	.....	15	297	314	477	1071	5526
	.....	20	392	356	572	1356	7236

\* The figures of the last four columns show:  
In line A, the number of pounds of resistance offered by the roadway per gross ton.  
In line B, the proper gross load in tons for a two-horse team able to exert a pull of 180 pounds for several hours.  
Below line B, but above the heavy marks, the number of pounds with which the team or brake must hold back while descending with the above loads.  
Below the heavy marks, the number of pounds with which the team must pull in hauling these loads.

## THE FIELD.

### Raising Kafir Corn.

In the recent quarterly report of the Kansas Department of Agriculture is a most excellent article on kafir corn, prepared by J. G. Haney, of the State Agricultural College, upon the request of Secretary F. D. Coburn. The subject is treated thoroughly by one whose learning and special experience give not only interest but authority to his remarks, and California growers may find useful suggestions in his writing.

PLANTING.—In planting kafir corn listing is generally satisfactory in the drier sections, and is the favorite method, as it takes less work, lets the roots deeper, is more easily tended, resists dryness better. The listing should be hardly as deep as for corn. The rows should be about 3 feet apart, and the seed 4 to 8 inches apart in the row.

For surface planting, fall plowing is favored by some and has its merits, as the soil which has been exposed to the weather during the winter has more available plant food in it than the soil deeper down. All crops start and grow faster on fall plowing for this reason. But the two great drawbacks to fall plowing are always present: the blowing of the loose soil, and the weeds, which thrive best on fall plowing. Where these two objections are not present, a good disking or fall plowing furnishes the ideal seed bed.

Spring plowing should not be done until time to plant—let the weeds get all the start they will, and the discouragement given by late plowing does much toward holding them in check for the season. The plowing should not be deep—no deeper than is necessary to turn the ground well and cover the trash. A very essential feature in the preparation of the seed bed is

to compact the soil as soon as plowed, so as to hold the moisture near the surface; for this purpose we used a sub-surface packer, but any implement that will accomplish the same results may be used. The plowed soil should not be left as smooth on the surface as when a roller is used, nor as fine as an ordinary harrow would leave it. A disk run nearly straight, harrowing with a heavy harrow, or rolled and then harrowed, is a great deal better than leaving the land just as the plow left it. The land should be given this treatment the day it is plowed. The press drill is the best implement for planting if done the same day that land is plowed and all the press wheels are left on; the drill is a very good packer and assists toward desired results.

THICK AND THIN.—Moderate crowding tends to lengthen the stalk and shorten the head, while wider planting shortens and thickens the stalk and lengthens the head. For hay or fodder it should be planted close, and the greatest yield may be secured by broadcasting or putting in with a wheat drill, set to sow one and one-half bushels of wheat per acre, which will put in practically the same quantity of kafir corn seed. For grain it should be planted in rows with a view to cultivating. For the drier country the rows should be 3 to 3 1/2 feet apart and the seed from 4 to 8 inches apart in the rows, while elsewhere the best results are with rows 30 to 36 inches apart and seed 2 to 4 inches apart in the row. For Western planting six to seven pounds per acre will be all the seed required, while for Eastern planting ten to twelve pounds per acre will give the best results for grain.

Any drill or drill planters adapted to such small seeds may be used, and will drop them the proper distance apart. Perhaps the best and most practical is the ordinary grain drill. As the rows should be 30 to 36 inches apart, the holes may be stopped by tacking a piece of pasteboard over all except those which will plant the rows the proper distance. On an eleven-hole drill, by stopping all but the outside holes and the middle one, the rows will be 30 inches apart; or by arranging a thirteen-hole drill the same the rows will be 36 inches apart, providing the distance between the shoes is 6 inches.

GROWTH.—Kafir corn, having a rather low vitality and growing slowly after starting, should not be planted until the ground is well warmed and there is no danger of frost. It comes properly just after corn planting, there being no hurry until the last week in May. But it should be in early enough to have plenty of time to ripen before frost. Ordinarily it takes about 125 days to mature seed, but if a dry spell comes the kafir corn goes into a trance, so to speak and is revived by the next rain and continues to grow as if nothing had happened, except that it is a few weeks later. Hence it is well to have planted early enough to give time for a nap if necessary. [These are interesting facts, but they have less application in California than in Kansas. On properly moist soil the plant grows right along and matures without a drop of rain from start to finish.—ED.]

SEED.—As in all crops, it is essential that good seed be planted as a first requisite to a high yield and a good stand. Kafir corn heats very often when sacked and in a dry place, especially if the sack is closely woven and there is some dust in the seed. Hence, seed that is not fresh or new is risky and should not be trusted. It may even sprout in a germinating pan and yet have a low vitality that would give a poor stand. It is always risky to trust seed that has been stored in any quantity in a close bin, for if thrashed early or late there is a possibility of its having heated enough to impair or destroy its germinating power.

CULTIVATION.—In cultivating, the same results are to be secured as in the cultivation of any other crop, namely, to keep the soil in the best possible condition for the best growth. Weeds must be destroyed; an earth mulch, or the surface of the soil, kept in such a condition as to prevent evaporation and take in all the moisture possible when the rains come. Many of the kafir corn roots run near the surface, so it is very injurious to cultivate deeply after the kafir has reached any considerable size. Spring-toothed cultivators are the best to use, and if the rows are 30 inches apart two rows may be cultivated at a time, as it is not necessary to run close to the row. In the first cultivation it is well to run close to the rows and destroy all the weeds, using large shovels if necessary. With listed ground the furrows should only be filled by cultivation. In all cases it is best to leave the land as nearly level as possible. After the plants are 3 inches high they will stand almost any amount of harrowing, and this may be continued until 8 inches high.

MATURITY.—Kafir corn remains green until frost and the seed does not shatter; so, if grain is the only consideration, there is no great hurry to harvest—it can stand until after frost and the stalk is dry. But generally the fodder is a consideration, as well as the grain, and then the problem is to cut when the best results from both may be obtained. The longer the fodder stands the harder and less palatable it becomes, while if cut too early the best yield of grain is not secured. After the grain is hardened so that it is difficult to mash between the thumb and finger, and there is little moisture, apparently, in the seed,



there will be very little shrinkage in the grain. This would perhaps be called "just past the hard dough stage." If cut earlier the fodder will be better feed, but there will be a considerable shrinkage in the grain.

**HARVESTING.**—One thing that has kept this crop from being more generally raised is the problem of harvesting. There are a number of methods and they all have their merits. If the fodder is desired for feed it is perhaps best to cut stalk and all and leave it in the shock until dry. The best machine for accomplishing this is the corn binder, which leaves it in bundles of convenient size for handling, and the fodder is held together. The common method, however, is to cut with a mower, and the crop should be left to cure well before raking. Ordinarily it is put into large shocks or small ricks containing from a ton to three tons each. This is done with a hay gatherer, "buck rake" or "go devil," and saves a great deal of handling. It keeps in excellent condition when treated this way and can be hauled when needed. It is ready to harvest for hay in about 105 days after planting, and this should be before frost, as freezing while green is detrimental; besides, the hay will not cure as well in cool weather, and it is essential that it be as perfectly cured as possible.

### The Hop Growers.

The hop growers have effected a permanent organization in accordance with the lines of policy already described in our columns. The corporation is to be known as the California Hop Growers' Association. The number of directors is seven, and those named to serve as directors for the first year are W. E. Lovdal and George C. Brewer, Sacramento; C. R. Farmer and Joseph Purrington, Sonoma; T. J. Fine, Ukiah; E. C. Riggs, Lakeport; C. R. Rogers, Watsonville. It was declared to be the sense of the Association that no agreement to be entered between the hop growers and the Association shall be binding unless 75% of the hop acreage of California has agreed to become and is at all times subject to the rules of the Association. The Board adjourned to meet in Sacramento, Aug. 4, to carry forward the work entrusted to them.

The current reports are for a reduced output of hops this year in this country. Inquiry made by Orange Judd Farmer in every important hop-growing county of New York and the Pacific coast points to an unquestionable shortage in the acreage now growing and fair but not brilliant crop development. Many correspondents report liberal areas plowed up this spring, while considerable areas in the West will not be cultivated and therefore must fail to add to the total yield. The hop area in New York is considerably less than last year, reports ranging 15% to 30%, perhaps averaging 20%. The condition of yards is generally good, although not uniformly so, some serious complaints coming forward. A good many old yards suffered through winter killing; here and there are reports of inroads by insects, but these are not general.

## TRACK AND FARM.

### The Horse Industry of the Northwest.

As we recently stated with reference to the sheep and the hog, so also with the horse, there is danger that California will allow her sister States farther up the coast to take the lead in supplying the local demand for animals and animal products. We need to pay more attention to these matters, and perhaps it will provoke our readers to more thought about it to read a very interesting account which Dr. S. B. Nelson, veterinarian of the Washington Agricultural College, prepared for the U. S. Department of Agriculture. It seems to us very suggestive.

**REVIEW OF THE PAST DECADE.**—Many times during the past few years articles have appeared in various publications giving statements regarding the absurdly low prices at which horses have been sold in the States of the Northwest. As descriptions of the animals sold did not accompany these statements, in many instances the public got the impression that, no matter how good a horse might be, if placed on the market, he would bring only a few dollars. This condition greatly discouraged horse breeders, and caused many of them to discontinue this important industry. There was a general decrease in the value of horses during the years 1893 to 1897. It was, however, only in a few cases (involving the compulsory sale of very inferior horses, being either wild, unbroken range animals or old horses that had nearly outlived their usefulness) that extremely low prices were paid.

Since the year 1890 the horse industry in this section has passed through three distinct periods. The first was from 1890 to 1893, inclusive. Thousands of horses roamed over the immense ranges, and all the owners did to guard their interests as producers was

to have an annual round-up in the spring to brand the colts and an occasional round-up when they wanted to sell a bunch of horses. During this period the value of the horse was good, averaging about \$60 per head. This price meant large profits for the producers, as it was not necessary for them to have any great amount of capital invested in lands, and the expense of raising the horses to a salable age was small.

The second period extended from 1894 to 1897, inclusive, during which the horse depreciated greatly in value, the average valuation being about \$20. Such a condition as this would have been reason enough to cause every horse raiser to cease breeding but for the fact that a general depression in values of all property existed at the same time. The depreciation in the value of the horse was not primary, but secondary, to the great commercial depression then prevailing.

Since 1897 we have the third period, during which the average valuation of horses has gradually advanced until at present it has reached about \$40, and everything looks favorable for a further rise.

The question which the horse producers of the Northwest, as well as of other sections of the country, must face is, "Will the price of horses advance so as to bring a fair return for the labor and capital invested in raising them?" The answer to this question will naturally depend on the supply of and demand for horses.

**EFFECTS ON THE INDUSTRY OF NEW INVENTIONS.**—Has the replacing of the horse by the electric street cars lessened the number of horses in use in this country? From 1887 to 1894, a period marked by great activity in street railway building, and also the increased manufacture and use of bicycles, the number of horses increased from 12,496,744 to 16,081,139. This shows that, although the use of the horse decreased in particular directions, yet there must have been a healthy growth in their use in other directions. During this period the selling value of horses gradually declined from \$72 to \$48 per head. But this decrease was certainly not due to the number of horses thrown on the market as a result of displacement by electricity in propulsion of street cars and the general introduction of the bicycle, because we find that the values of other live stock—mules, milch cows and other cattle—decreased from 30% to 40% during the same time. During the prevalence of the great commercial depression from 1893 to 1897 the number of horses in the country fell to 14,364,667. At the same time the value per head suffered a further decrease, the same being the case with sheep, swine and cattle other than milch cows. The cattle interest was the first to recover, being followed a year later by the other stock interests.

Is it likely that there will be a continued demand for the right kind of horses? A great deal has been written about the probable displacement of the horse by the automobile, but it hardly seems probable that it will produce any more serious effect than have the electric street cars and bicycles. Each has its sphere of usefulness, and each will continue to have.

**THE PRESENT AND PROSPECTIVE DEMAND.**—What demands for horses can the Pacific Northwest supply? First of all there is the home market, to which further reference will be made. Then they are wanted for export; they are shipped north, west and east. To the north they are sent into British Columbia and Alaska. The former takes a very good draft horse. The exportation to Alaska is at present small and includes a poor grade of horses, but it will undoubtedly change for the better as that country becomes more and more developed.

To the islands of the Pacific and the countries of Asia the shipment of horses is as yet not very large, but to Hawaii alone exportations increased in value from \$8000 in 1893 to \$38,000 in 1897. With a definite knowledge of the type of animals wanted there, the States of the Northwest should certainly be able to produce a very desirable horse for that market at a better profit than any other section of the United States.

The Eastern market demands at present either a draft horse for export to Europe, or a lighter animal at a lower price to replace the one disposed of by Eastern breeders. This latter animal is the one that the Northwest has produced on its ranges at very little expense up to the present time. He is a medium-sized animal, a little rangy, but with good legs and feet; has a good constitution, and, after being broken to work, makes a good, serviceable animal. His great fault in the eyes of the Eastern horse buyer is the blemish he carries from the branding iron.

There is no reason why a heavier and more desirable horse should not be furnished from here and a high market price obtained from him. The ranges are being gradually settled and cultivated, so that the bands of range horses are becoming less numerous each succeeding year. As a result, the raising of horses is gradually passing out of the hands of a few individuals to be taken up by many as fast as the increased price of horses justifies.

**THE HOME MARKET.**—What will the market in the Northwest be? The market for heavy draft horses will be in the large logging and mining camps that use thousands of horses annually; in the cities and towns horses will be wanted for heavy and medium

fancy teaming; the lighter breeds will be in demand for light teaming and for family and fancy driving.

In order to obtain a high market price for any horse it is absolutely necessary that he be individually good for his purpose, whether it be for heavy or light draft or for driving. In addition, he must be sound and stylish. The very heavy horse, that will serve well to move slowly great loads on the smooth roads of cities or towns, will be of less value in the logging and mining districts, where rough roads make it necessary that the horses used be active as well as large. The same remark will apply to drivers. The small, smooth driver fills its own place, but can not replace the larger, coarser driver for country use. The home market, then, requires for logging, mining and contracting a heavy horse, weighing from 1450 to 1700 pounds, having a good, round barrel, being short in the back, having good feet, solid legs, and shoulders set fairly up, so as to give considerable action; a horse that will draw a fair-sized load, and, when it is required of him, trot down a rough mountain road without stumbling and falling. An animal of the above description that has good style, the head and neck being well set, will also do for fancy teaming in the city, where a team is often used as an advertisement as well as for work.

Such horses can in all probability be produced by choosing out of our native stock certain mares weighing about 1400 pounds and crossing them with Percheron stallions or with selected English shires or Clydesdales. At present, unless the selections are carefully made, the crossing of our native mares with Clydesdales gives a horse that is very large, not having extra good style, narrow in the chest and across the withers, rather long in the back, but with good rump and legs; an animal that looks massive and that will draw great loads, but is not very active and trots hard. They are, however, quite easily matched and find fair sale in the cities for heavy teaming.

In the line of drivers the market demands for heavy work a horse that weighs from 1100 to 1250 pounds, is strong and active, of good color and style, one that with its mate will take the carriage along at a 10-mile-an-hour gait if necessary. This horse, when very gentle, will also make a valuable animal for family use.

I believe the Northwest can produce such an animal by crossing 1050 to 1200-pound mares, of good color and action, with either a French coach or a Cleveland bay stallion. Such a cross would, without doubt, give as a result an animal having great endurance, in addition to the other qualities demanded by the market. In the same way a driver with about the same qualities as the above, but lighter, and, consequently, a little more active—one that would go well in single or double harness to a light buggy, and, if called on, could step along at a 12-mile-an-hour gait—could be obtained by crossing selected mares with either a hackney or trotting stallion. The hackney would probably give the better style and action.

Granting that the extensive horse raiser is gradually losing the range for running large bands, whom will it pay to raise the different kinds of horses that have been described, and for which there appears to be a good market?

It must be the farmer, whether large or small, and each should produce horses of a particular kind. It will pay the farmers of the Northwest to keep on their farms a number of good mares and breed them to good stallions that they believe will bring them an offspring of a certain type, for which there is each year a market at a good, fair price. It will also pay the small farmers and gardeners near cities to use for their work lighter mares, which may be bred to stallions of driving strains, and thus be able to furnish the material for drivers for the market. It should be remembered that it costs no more to raise a good horse than it does a poor one.

Acting on the valuable information continually gathered and distributed through the United States Department of Agriculture regarding the kind of animals wanted for export to the various countries, and having native stock with such great endurance and with such excellent legs and feet, the horse breeders and horse raisers of the Northwest should have no great difficulty, by judicious breeding to sires of style, color and action, in producing horses that will command a high price in the markets of the world.

In order to stimulate the culture of wheat in Georgia the wheat growers have been offered large prizes for the best results shown at their wheat growers' convention. No contestant can compete for more than one prize. No county is eligible to more than one prize. This is done to distribute the prize money.

In a 12-foot piece of lumber, 4x4 inches at one end, 6x6 inches at the other, there are 25½ feet b. m. To take the mean would give 25 feet; to take the contents top and bottom would give 26 feet. The accurate result is reached by assuming the stick extended to a perfect pyramid, then subtracting the top pyramid from the whole; the pyramid would be 36 feet long and would contain 36 feet; the lesser pyramid would be 24 feet long and would contain 10½ feet; the difference is 25½ feet.

A "KNOT" is a nautical mile, and is equal to 6080.27 feet, or 1.15156 statute miles.



## Agricultural Review.

### ALAMEDA.

**BUGS MAKING FRUIT UNSALABLE.**—Livermore Herald: Fruit growers are having unusual difficulties to contend with this season. Fruit is of fair quality and plentiful considering the frosts, but both birds and bugs are so numerous that they are taking the crop. The bugs are of the striped ladybug variety, and they are boring into the apricots and peaches to such an extent that much of the fruit is unsalable.

**EVAPORATING SPUDS FOR UNCLE SAM.**—Oakland Enquirer, July 13: The San Leandro Evaporation Company has resumed operations after a temporary shutdown to permit the placing of the new boilers for cooking purposes. The concern has in hand a Government order for evaporated potatoes to be sent to Manila and about thirty girls and six men are employed night and day on this order. After this contract is finished, which will be the end of the week, it is planned to commence drying apricots for the fruit growers.

**CANNING NOTES.**—From fifteen to twenty tons of apricots are being handled daily at Hunt Bros.' cannery, San Leandro, and by next week the receipts of this fruit will run from thirty-five to forty tons daily. The apricots will last well on to the end of the month. All fruit not fit for canning will be dried. The output of apricots can not now be stated, because so many of those contracted for are being rejected. Peaches are earlier this year than was expected. Plums will be ready for canning in another week. The varieties to be handled by Hunt Bros. are Washington, Jefferson, Yellow, Egg and Green Gage. About 150 tons will be handled. The second crop of strawberries is expected in a week or ten days. The company will pack 300 cases from Watsonville. The present working force is about 400, but it will be increased to 700 during the coming week.

### BUTTE.

**OLIVE TREES WELL LADEN.**—Oroville Mercury: It is thought that the coming olive crop will be twice as great as last year, when several hundred thousand gallons of pickled olives were put up and hundreds of gallons of oil made.

**ABANDONED HEMP GROWING.**—Gridley Herald, July 14: Harry A. B. Cook, for the past two years superintendent of the Rau hemp ranch, has departed for San Francisco. The experiment of raising hemp has been abandoned, and the ranch is seeded to alfalfa. The failure to make hemp pay is said by Mr. Cook to be due to the inability to secure labor at cheap rates. Mr. Cook tried to produce hemp similar in appearance to the Italian product, and used methods identical with those in vogue in Italy. Italians were brought over and employed, but the sons of sunny Italy soon demanded higher wages, and under the conditions of the trade it was impossible to use the Italian methods and make a profit. Jno. Heaney is the only producer who still sticks to the hemp business, and he seems to be satisfied. He applies different methods, and by the use of machinery is able to pay fair wages and a heavy freight rate to New York. The experience of all who have attempted hemp raising proves that the climate and soil are admirably adapted to the growth of this valuable fiber plant; and, if the day ever comes when the fiber can be manufactured on this coast, hemp growing may be an important industry. Mr. Heaney, by eliminating most of the hand labor used in making hemp fiber by the Italian method, is doing well, and others must evidently adopt similar methods under present circumstances at least.

### CONTRA COSTA.

**DISTRICT FAIR.**—Oakland Enquirer, July 13: The county will make a special effort this year to have the district fair to be held at Concord representative of the agricultural and horticultural resources of this section as well as of its live stock interests. The dates for the fair are September 18th to 23d. The grounds will be put in first-class condition and it is expected that many visitors will attend. The fair will be managed by Henry Curry and A. B. McKenzie.

### FRESNO.

**VALLEY CITRUS FAIR.**—Fresno, July 14: Five counties were represented at the meeting of the executive committee of the San Joaquin Valley Commercial Association here to-day. In accordance with the request of the Tulare county representatives, the committee decided to hold a valley citrus fair at Tulare during the last week in November in conjunction with the annual fair of the Twenty-fourth Agricultural district.

**SHEEP INDUSTRY.**—Sanger Herald, July 14: Quite a number of the sheep men

of this section have driven their flocks back to the valley from the mountains lately and have finished shearing, the crop of wool being generally light. The wool market abroad is dull and inactive, with the greater portion of the spring clip unsold as yet, consequently no offers are being received by the local wool growers for the fall clip. Shearers are demanding 6 cents per head, and all the mutton they need for the camp. Grain stubble is plentiful on the plains, the best of it being offered to the sheep men at 15 cents per acre.

**FLOUR MILLS BURNED.**—Fresno, July 13: Fire broke out this morning in the fourth story of the Sperry flour mills. Once before, in 1893, the mill was destroyed by fire. Better fortune attended this fire, for the stock warehouse, offices and storage rooms were saved, the loss being mainly to the machinery and estimated to exceed \$20,000.

**MELON GROWERS' COMBINE.**—Fresno Republican: The organization of the melon growers' combine has been completed. The association starts with a membership of 95% of the growers of the county. The directors agreed that melons of 14 pounds should sell for \$1.25 a dozen and melons of 12 pounds for \$1.10 a dozen. The minimum weight of marketable melons was fixed at 8 pounds. The directors also directed that no commissions should be allowed, but that all sales to be f. o. b. Prices are subject to change. Following are some of the agreements which the members signed: That we will appoint a committee of five to fix price for and deliver all melons shipped by us, and to receive the money paid for them. The committee is authorized to reject all melons offered for shipment which are not merchantable, and to cause all melons to be graded as follows: The number of each kind or variety in the car, the average weight of all melons and also the smallest size. The committee shall retain 20% of all moneys received from sales and hold the same from each grower, which is deposited as a guarantee that each will comply with all conditions. Sixty per cent of the growers constitute a quorum at growers' meetings and three members of the board of directors must be present at the meetings of the latter. The 20% retained is to be paid back to the growers at the end of the season, Aug. 15th, provided they have not violated the terms of the contract. The members agree to have nothing to do with any dealer who buys from growers not in the association.

### GLENN.

**A FAIR, BUT NO RACES.**—Willows Journal, July 10: The Directors of Glenn County Agricultural Association No. 42 met this afternoon and decided to give an agricultural fair, omitting the racing feature. Cash prizes and awards will be given for exhibits of cereals, stock, fruit, etc.

### HUMBOLDT.

**DAIRY EXPORTS.**—Eureka Standard, July 11: As shown by data gathered from monthly statistics of exports of county produce, June, 1900, held up well in the matter of shipments of butter. While the shipments were 42,485 pounds less than those of the previous month, which was the banner month, they were the next largest on record, being 14,395 pounds greater than those of the month of June, 1899, which formerly held the record. The exports of June butter for the past seven years have been as follows: 1894, 397,960 pounds; 1895, 456,380; 1896, 458,900; 1897, 510,230; 1898, 465,110; 1899, 603,970; 1900, 618,365 pounds. There were also shipped during last month 861 cases of condensed milk and cream.

### KERN.

**LIGHT HONEY CROP.**—Bakersfield Echo, July 12: T. M. Rigney, manager for Porter Brothers Co., says the honey crop this year will be light. It is expected to reach between ten and fifteen carloads. The most of this honey is produced in the Old River and Buttonwillow districts. But there is money in the industry. Last year, from 300 stands, Harris & Sisson received \$12.50 per stand. Their apiary is near Buttonwillow. The hardest thing growers have to contend with is the low prices forced by "glucose" manipulators.

**APRICOT CROP.**—Porter Brothers Co. has just completed its pack of the apricot crop. While not a big year in this commodity, yet the company has received from growers in sweat boxes over 125,000 pounds. The average price paid in the sweat boxes was 5½ cents per pound, which netted the farmers over \$7400. This is not a bad showing, when it is considered the fruit industry is comparatively new in this county.

### KINGS.

**STOCKHOLDERS' MEETING.**—Hanford Journal, July 12: The stockholders of the Hanford Creamery Co. organized by electing Geo. X. Wendling, president; C. M. Cross, vice-president, and F. J. Peacock, secretary and manager. The other two

directors are Frank J. Wendling and J. Augsberry.

**CREAMERY WILL OPEN.**—Hanford Sentinel, July 12: Announcement is made by F. J. Peacock, manager, that the Kings County creamery will start up for business on July 18th at Hanford, and the skimming stations at Gallup and at the Lakeview cheese factory building will also begin operations on that date.

**PORTABLE PIT HULLING PLANT.**—The apricot pit hulling plant that is being put in at Armona by Mr. Chapman will be running in a few days, and he has a large quantity of pits already contracted for. His plant is a portable one and does its own grading and sorting by machinery, and when he has worked up the product of this locality he will ship the plant to other fields.

### LOS ANGELES.

**SUB-IRRIGATION.**—Pasadena Star, July 11: The following from a discussion at the recent meeting of the North Ontario Horticultural Club is of interest: Mr. Ross stated that he has 100 trees where he fills the ditch with leaves to make humus. They do better than other trees. Though he is short of water, they have borne 300% more. He crosses his ditches filled with brush. The irrigation ditches crossing them fill them with water. As they are 150 feet long, they hold fifteen barrels. Dr. Woodbridge referred to Mr. Green and Mr. Ford at South Pasadena, and Mr. Miller at Altadena, where favorable results from sub-irrigation in holes can be witnessed. Mr. Miller made his holes 6 feet apart. Mr. Ford has his 4, 5 or 6 feet from the tree. Mr. Ross states that every morning he puts stable manure in the holes and covers them up. When irrigating comes round he holds the water twelve hours in them. Then the trees get liquid manure. He has done so for three years. Dr. Woodbridge prefers the holes to be left open, because when irrigation stops he wants the holes to be dry, as that decreases danger from roots crossing and filling up.

### NAPA.

**HULLING APRICOT PITS.**—Napa Register, July 12: At the cream of tartar works, H. C. Kinsey of W. G. Read & Co. buys apricot pits, which were a few years ago thrown away as worthless, paying therefor \$5 to \$12 per ton. All depends upon the quality and condition of the pits. Of these he has on hand over 120 tons and expects to purchase 200 to 300 tons more. These pits are fed into a cracking machine, and out of one end the shells are dropped and out of the other come the meats. The capacity of the machine is twelve pounds of pits a minute.

### SAN BERNARDINO.

**HONEYCROP SMALL.**—Redlands Facts, July 13: From conversation with bee men the following has been gleaned as to the honey situation: The bees in the county have been self supporting. In few instances have they had to be fed extensively. Many of the apiaries will have a small amount of honey to market, but the whole crop is insignificant. Several of the bee men are extracting now. They have little white honey, most of it ranking as light amber. Horne & Lord expect about two tons from the way it is carrying off now in the extracting. J. Heitman will have one and a fourth tons. Four years ago this apiary yielded eleven tons. Others are yielding in about the same proportion. The total crop of the county will be two carloads. The normal crop in ordinary seasons is twelve to fourteen carloads. The total crop in southern California is estimated at but six carloads, or less than half the amount usually produced in this county. First quality white honey is selling for 8½ cents, and is scarce at that price. Amber and light amber ranges from 6½ cents up. Bees are in good condition where they have been properly handled; but in the western part of the county they have been neglected and there is considerable foul brood. The inspector has had to burn hundreds of colonies because of the presence of this disease. It is a significant fact that, although the honey crop has been a failure for three seasons, and there have been many hundreds of colonies lost, besides the enormous expense of feeding and caring for the bees without any return, there is a great deal of inquiry for bees and none at all for sale.

### SAN JOAQUIN.

**BROOM CORN.**—Lodi Sentinel, July 14: W. H. Adams has a fine sample of broom corn which is being grown by Arthur Thornton and S. C. Olden at New Hope. They have about 300 acres and a large crop will be produced. The corn will ripen next month, and was so planted that it will mature at intervals during the season. There is a ready market for this article and a good price is expected.

**FRUIT SHIPMENTS SLOW.**—Very little fruit is being shipped East from here at present, nor has any considerable quan-

tity gone out this season. Fruit men are more or less dubious over the market prospects. Peach growers are hardly making a consignment. The heavy shipments reported from Georgia and from this State have upset the markets. Plums, prunes and some pears are going out and returns are fair. The dried peach output will be light, owing to the fact that growers have sold the bulk of their crop to the Stockton cannery, preferring a small price to a very unsettled market in the East.

**TO MAKE SACKS.**—Stockton Mail, July 12: The Stockton Jute Mill & Manufacturing Co. has been incorporated, with the intention of manufacturing and selling sacks, twine, rugs, etc. The officers of the company are: J. Robertson, president; J. C. Grider, vice-president; Surn Jackson, Treasurer; T. W. Boalt, secretary; F. E. Dunlap, attorney. The company is incorporated for 250,000 shares at \$1 per share, and all the stock is to be non-assessable. It is proposed to sell about 150,000 shares at this time. There are from thirty-eight to forty-one million bags imported every year, which insures a large field for the product. The capacity of this mill for one year by single shift is about 4,000,000 bags. The estimate of the cost of production was made from the actual cost of production at Oakland. This estimate was \$.0462 per bag.

### SANTA CLARA.

**APRICOTS ARE SMALL.**—San Jose, July 14: Apricots are being harvested rapidly and there is universal complaint that they are averaging smaller in size than ever before known in this valley. The cause is not definitely known, but it is ascribed to the light rainfall of the past three winters.

**WINERY BURNED.**—This morning the winery of H. L. Reynaud was destroyed by fire. The total loss is placed at \$7000, with \$2250 insurance. Considerable cooperation and wine were destroyed.

**HARVESTING SEED CROPS.**—Gilroy Gazette, July 13: Harvesting is in full swing at the seed farm of the C. C. Morse Co. The thrashing of sweet peas commenced on Saturday, the crop being one of the largest ever gathered on the ranch. Conditions have been exceptionally favorable this year for a splendid yield. Volunteers have been in bloom since April and it will be several weeks ere they will be ready to cut. There was not a large crop of spinach, the output falling below the average. The seed is of good quality and the yield from the seventy-five acres will command good prices. Two new thrashing machines have been put in operation this year, one for small seed such as spinach and the other for sweet peas, etc. Next month will open the harvesting of the onion crop which is rather light. It is understood that the production of this seed is the most profitable feature of the industry.

### SANTA CRUZ.

**SALE OF APPLE CROP.**—Watsonville Pajaronian, July 12: G. W. Bird sold his apple crop for \$2457 to Stolich Bros. The orchard contains less than 3000 trees—mainly Newtowns—seven years old. The fruit was sold to the best bidder after sealed bids had been received. There were eight bidders and the offers ran from \$1625 up. Last year the apple crop of this place sold for \$600.

**BEET CROP.**—The sugar beet crop is very light outside of Pajaro valley, and in several sections of this valley it is spotted. It has been a boom season for bugs. From Watsonville to Camp Goodall, along the Beach road, the beet crop is a beauty, and it has every promise of a heavy tonnage per acre.

**LADYBUGS IN HAY.**—The first consignment of ladybugs—2000 in number—was received from Chualar by C. H. Rodgers. Another shipment of 10,000 is expected in the near future. The bugs will be put in his orchard to exterminate the woolly aphis. Some people who have been buying hay from southern Monterey county find that they get ladybugs with it. By this means the Silliman Bros., who have been buying hay from that section for years, have had their orchard almost completely cleared of the woolly aphis.

### SUTTER.

**NEW GRAIN PEST.**—Red Bluff Cause, July 13: In some grain fields in District 70 road mice have become so numerous as to reduce the harvest. They are so thick that after the harvester passes over great numbers of crows follow to pick up the killed and wounded.

### TULARE.

**RUST DAMAGES GRAIN.**—Visalia Times, July 12: Grain harvest is progressing rapidly, but the crop is hurt worse by rust than was at first thought. The crop of this vicinity will not average over six or seven sacks per acre, and if the rust had not struck the grain it would have gone ten sacks.



## THE HOME CIRCLE.

### The Little Shoe.

I'd been out in the fight and frenzy,  
In the desperate struggle and strife  
In the battle that men call business,  
And came home wearied of life.

I dragged my coat from my shoulders,  
And tossed my hat with a sigh;  
I threw me prone on the sofa,  
With a hand pressed over each eye.

And yet I saw visions and visions  
Of the turmoil and clamor and din,  
Of the pitiful grasping for riches  
By methods approaching to sin.

I rose to dispel these bad visions;  
Had just reached the library door,  
When something arrested my notice,  
Something lying upon the floor.

'Twas nothing of serious import;  
Nothing tragic, uncanny, or grue,  
For the thing I saw lying before me  
Was only a little shoe.

Only a wee baby's something,  
Yet great as the world is wide;  
Lying there just where she kicked it,  
Topped upon its side.

'Twas worn and battered and crumpled  
But it set my heart in a glow;  
The buttons were lost or loosened,  
And a great hole kicked in the toe.

I stooped and raised it, and fondled it.  
My breath came faster to think  
Of the wee chubby foot that wore it,  
That wee chubby foot so pink.

And I tiptoed into the bedroom,  
Where a cradle was standing still;  
I saw a baby foot peeping  
As baby feet sometimes will.

Pushed through the rounds of the cradle,  
Dangling so tempting and sweet,  
I dropped on my knees beside it,  
Close down by dear baby's feet.

I clasped the warm lump of "tootie"  
Between the broad palms of my hands,  
I was instantly transported hither  
To fairer and happier lands.

The touch of that wee tender hand  
Sent a thrill through my uttermost part,  
From the furthest tips of my fingers  
To the bottommost depths of my heart.

'Twas so soft and so warm and so precious,  
And I kissed it again and again,  
And I thought a wee babe such a blessing  
To be sent to the lives of men.

My kissing disturbed the dear sleeper;  
She drew in her foot through the rounds;  
And turning and tossing and sighing,  
Made such murmuring, baby-like sounds.

I rose and bent over the cradle,  
And gazed on her dimpled form,  
Till the folds of the little pink nightie  
Seemed a mystical mantle so warm.

I saw her breathe softly and gently,  
Like the swell of an angel's sigh;  
And I turned with my eyelashes glistening  
As the dew from a summer sky.

I'd forgotten the fight and the frenzy,  
And the desperate struggle and strife;  
I'd forgotten the battle of business,  
I was chastened and charmed with life.

—Chicago Times-Herald.

### Waupinna's Wedding.

Some hundreds of miles from the centers of population the moon slowly rose over distant hill and plain, the silence occasionally broken by the cry of the mopehawk, or the wail of the dingo, as a large mob of natives reached a natural arena, where stood numerous giants of the forest, rearing their heads proudly aloft, the leaves on the topmost branches gently stirred by the evening breeze, while between their huge trunks the countless acres of waving grass appeared as a silver sea.

The warriors were in their war paint. Around their bodies they wore wirrapas, composed of human hair, plaited and ornamented with feathers, and the white tips of the tails of the sandhill rat. Their bodies were daubed with white copi, to represent skeletons and other weird designs. Feathers were

attached to their ankles, and these they wore also on their heads, while a liberal application of red ochre and copi to their faces completed their toilets. In their hands some carried barbed spears and shields of mulga wood, artistically carved and colored, while others were provided with nulla nullas and boomerangs. As they advanced from the belt of timber they had just traversed, they were observed to be accompanied by their lubras, which indicated that war was not the object of the gathering. As they halted, the lubras, forming a semi-circle, sat on the grass, and silence reigned supreme.

Hark! the cry of the whip-poor-will is heard. Instantly all heads are turned in the direction from which the sound emanated. Again the cry arose. This time one of their number imitated the cry, and shortly after another tribe of the dusky denizens of the bush advanced to the arena. They were also fantastically adorned, and accompanied by their lubras.

The new arrivals were a friendly tribe, assembled to hold corroboree, or "native dance." The leading warriors advanced and saluted in the usual manner, and, by way of welcome, the surrounding lubras sang a dirge in a monotonous tone, accompanied by the beating together of boomerangs. Dry wood was collected in the vicinity, and fire-sticks, with which they were provided, applied, and the flames shot up in the air, illuminating the surroundings and the assembly of grotesque figures. The proceedings commenced by each tribe taking opposite sides, and with agile and sinuous movements the warriors posed first as attacking an enemy, subsequently retreating; again, as if creeping upon a foe, brandishing the weapons they carried. The lubras during the dance sang of deeds done, but not forgotten, their voices regulated in cadence to the movements of the warriors, the latter also contributing to the harmony. The visitors had brought with them several young lubras who had been selected as wives of some of the other tribe, and the object of the corroboree was practically a betrothal. One young warrior, Yo Yeo, who was not considered sufficiently expert as hunter or in warfare, was not included among the candidates for matrimony. He became enamored, however, of a dusky beauty, the daughter of the visiting chief, and was observed to pay more attention to her than to the ceremony in hand. Waupinna, the lady in question, was not in the market. The old chief, being much attached to her, had not included her in the matrimonial deal, desiring to keep her longer with him. The ceremony ended, each tribe returned whence they came. Yo Yeo became restless on his return and lost interest in his usual avocations. A fortnight elapsed, when he left the camp and was absent for three or four days.

In the darkness, towards midnight, a creeping figure stealthily approached the camp wherein resided Waupinna, now hushed in slumber, his only weapon being a barbed spear. The nocturnal visitor was Yo Yeo. He had visited the camp the day previously, ostensibly with a friendly greeting from his tribe, really to locate the position in which Waupinna's wurlie was situated. Foot by foot he advanced, dragging his spear behind him clenched with his toes—a favorite method with natives "who pick up articles with their toes instead of stooping." Reaching the spot where Waupinna reclined on her rugs, he inserted the spear amongst her hair, and gently drew her toward him. Awakening from her slumber, she at once understood the situation, and, gliding from the wurlie, followed her captor in silence. The custom of annexation is common amongst them, and to have raised an alarm would have meant instant death to her. Cautiously they threaded their way, until they were, as they supposed, clear of the sleeping camp; but to the horror of Yo Yeo, Waupinna suddenly screamed, having unwillingly trodden on the recumbent form of a native sleeping on the outskirts of the camp. The alarm roused the sleepers, who, grasping their weapons, sallied forth. Yo Yeo gained some little time as the natives did not at once

find the cause of the alarm until Waupinna was missed; then they spread through the bush in pursuit. Yo Yeo in the interim had seized Waupinna and borne her rapidly away in the direction of a billabong, or waterhole, into which he plunged with his burden, crossing to the opposite side. He released her, and they waded in shallow water under the banks for some distance before landing, with a view to frustrating any attempt at tracking them, which the pursuers would be unable to do till daylight appeared. On leaving the water they hurried their footsteps, and about noon they reached Yo Yeo's camp. He constructed a roomy wurlie, and took possession with his bride. No questions were asked about his movements; the possession of a wife answered for his absence, and the members of the tribe pursued their usual avocations of hunting and fishing. Three days later a member of the tribe returned to camp bearing a challenge which he had discovered from Waupinna's tribe. They had succeeded in tracking the fugitives to within a short distance of the camp, and hence the challenge to combat. There was no necessity for acceptance or otherwise, it being an unwritten law that when a challenge is met with both sides mean fighting. Two days later the tribes met in mortal combat in the vicinity of their recent friendly corroboree ground, but on this occasion the lubras were absent.

Yo Yeo, having taken unto himself a wife, and being the cause of the affray, was permitted to take part in the combat. Leaving Waupinna with the other lubras and old men, he sallied forth to do battle for his bride. The conflict raged, and many fell on both sides. Yo Yeo was observed in the thick of the fight, and he fought with desperation until a wily foe, taking him in flank while he was engaged in hand-to-hand encounter with another of the enemy, brought his nulla nulla down with a crash on the head of Yo Yeo, and so felled him to the ground, and he was captured by the enemy, who desired to be revenged for the capture of Waupinna. The opposing forces eventually withdrew, each carrying their dead with them, and on reaching camp loud was the wailing of those bereaved. The dead warriors were buried according to their customs, and each tribe philosophically went the even tenor of their way. The following day Waupinna stole from the camp, and, as it was surmised, she had returned to her tribe, no effort was made to follow her. Waupinna, in the brief time she had been acquainted with her spouse, had become much attached to him, and had decided on returning to her own camp in search of Yo Yeo. With cautious steps she approached after dark, and great was the joy of the old chief at her return. She purposely misled him concerning the object of her return. She elicited the fact that Yo Yeo had recovered from the blow he had received in the combat, and was a prisoner, guarded by Yarrabong—a native who had been a suitor for Waupinna prior to the advent of Yo Yeo. Subsequently she cautiously approached the wurlie of the prisoner, worming her way with snakelike movements to avoid Yarrabong. She raised a piece of bark, of which the wurlie was constructed, and notified her presence to the prisoner, who slightly shifted his position. Through the aperture she handed him a nulla nulla, and again glided away into the darkness, and by a circuit reached her father's wurlie. Shortly after Yarrabong was sent for. He approached, having resigned his prisoner to another. On his entering the old chief handed to him a skin of pituri or native tobacco, and negotiations were opened with a view to Waupinna becoming the wife of the visitor. All being arranged satisfactorily, the latter retired to the wurlie occupied by the prisoner; but on reaching it he discovered the sentry lying dead and the prisoner absent. He raised an alarm, and the dusky warriors sped through the bush to recapture him.

Impatiently Waupinna awaited the warriors' return, knowing they were unable to track in the darkness. She then sallied forth to rejoin Yo Yeo. On entering a belt of large timber she was startled by a signal from among

the overhanging boughs. Halting, to her joy she beheld Yo Yeo, who had been ensconced in the tree, expecting she would hasten to join him. It was approaching daybreak, and they dared not linger; so, hastening their footsteps, they reached a range of mountains, up which they ascended. Observing a cavern-like aperture, they explored it for some distance, discovering a shaft caused by volcanic agency. This they climbed, and reached a drive on the side. Into this they turned, and traversing it for a short distance found themselves in a roomy natural cave. Here they halted, as without rest it was impossible for Waupinna to continue the journey. There were two fissures at the side of the cavern, one overlooking the mountain side, while the other led to a small gallery, at the end of which daylight appeared. He left Waupinna, and procuring some dry bushes improvised a rude couch. Waupinna, lying down, fell into a heavy slumber. While she slept Yo Yeo, after surveying the surroundings, again made his exit, and shortly after returned bearing a supply of roots, munyaroo, and nardoo, with which to refresh themselves before continuing their journey. He then collected a number of rocks, which were found readily to hand. These he placed at the verge of the shaft by which they had ascended, took up a position commanding a view of the open country, and awaited the coming of the enemy, his only weapon being the nulla nulla with which Waupinna had furnished him. He roused Waupinna, and placed food before her, of which she partook and arose much refreshed. Ere this the enemy had followed their tracks, and were even now negotiating the shaft. As he reached the spot some were within 20 feet of where he stood. He then promptly resorted to the rocks he had collected, which he hurled down on the heads of those ascending. With yells they released their holds, and fell headlong to the bottom. By this means many were killed and injured. He hastened to the side of Waupinna, and bidding her follow, essayed to escape by the gallery. On emerging into the daylight no enemy appeared in sight, and grasping her hand, he bounded along over the uneven country; but, turning a rocky point, he found their advance impeded by three of the enemy. He drew back, and as he did so, a spear came hurling through the air, and embedded in the ground at his side. Seizing it he quickly rounded the knoll by which he was now sheltered, climbed over the top; and ere the enemy observed his movement he cast the spear with unerring aim at one of their number, who fell transfixed by the weapon. Rapidly descending and again grasping Waupinna by the hand, he bounded down the mountain-side, and gained a considerable distance, ere the enemy had recovered from their surprise. On observing the fugitives, they gave chase. Others of their number, arriving on the scene, joined in the pursuit, and from rock to rock they sped. Occasionally a spear flew ominously near; but, nothing daunted, on they pressed, and reached more even country, which they traversed in the direction of a gorge near by. They gained in the race for life until Waupinna fell, and was unable to proceed. Yo Yeo grasped her in his arms, and continued. The enemy now gained on them, but on their entering the gorge, to their joy, Yo Yeo beheld his own tribe issuing therefrom.

The pursuit ceased then, and a number of warriors were launched at the pursuers. Being exhausted with their chase of Waupinna and Yo Yeo, they fell victims to the newcomers. The opportune arrival of friends was due to their shifting camp for winter quarters. Placing Waupinna with the women of the tribe, Yo Yeo joined the warriors in pursuit of the foe, whom they hunted from rock to rock. Many were slain, while the remainder sought safety in flight from the field. Yo Yeo in the fight met Yarrabong in mortal combat, when the former settled all differences by slaying his opponent. They then rejoined those left at the gorge, and continued their journey west. Yo Yeo became much esteemed



in his tribe from his prowess in war and the hunting field, and when the old chief was borne to his last resting-place the mantle of authority fell upon his shoulders.—Adelaide Observer.

#### A Newfoundland's Revenge.

A large Newfoundland dog belonging to a physician gives evidence of the intelligence generally alleged of the canine race. He is the mail carrier for the household, and is deeply impressed with the confidence reposed in his fidelity in the performance of his duty. This fidelity seems to be recognized by his canine neighbors, and one of them, at least, has shown a mean disposition to take advantage of it, and to annoy the Newfoundland when thus engaged, writes Rev. A. H. Noll in *Our Dumb Animals*. This teasing poodle is of spotless white, belonging to a lady of means, who employs a colored servant whose duty it is to give the poodle a daily bath and comb its hair. Gyp never attempted to molest the big Newfoundland when the latter was free to prevent it. Nor did he ever molest his giant neighbor but twice when he was carrying his master's mail. The first time the Newfoundland treated Gyp's jumping up and snapping at his tail with dignified contempt. This emboldened Gyp to repeat the indignity the next morning, as the Newfoundland was returning home with a large bundle of letters in his mouth.

The Newfoundland never paused in his errand. He laid the package of letters on his master's desk and then turned back in the direction of the post-office. There was in his movements, as well as in his intelligent face, an air of quiet determination. But no one could guess his intentions until he reached the place where Gyp was standing, fresh from his morning toilet. He then turned quickly, seized the spotless poodle by the neck, and carried it across the sidewalk to the gutter. There had been a rain the night before and the gutter was filled with muddy water. The Newfoundland dipped the poodle into the muddy water twice, then deposited the mud-bedraggled and humiliated dog upon the sidewalk and returned to his home quietly, without so much as a backward look at his victim.

A bystander was watching the entire proceeding and vouches for all these details, and for the dignity maintained by the Newfoundland as he administered what he evidently believed to be necessary discipline. And this witness' veracity is in no way impeached by his declaring that it seemed to him that the Newfoundland was positively laughing as it returned home.

#### Make the Best of Yourselves.

Shake off your listless, shuffling ways, boys, gather up your energies, and set about making all there is to be made of yourselves. Now is your springtime—your budding, growing, improving time; make the most of it and fill each day to the brim with sturdy activity and manly action. Throw back your shoulders; straighten up; look with a keen glance out upon the great work field of the world, and see what it can teach you. The world has little need of you as yet, but you have need of the world. It is full of experiences, and object lessons, and hints and suggestions, for the days coming to you. Use your tongue little, but your eyes constantly. If young people would only use well their keen, quick eyes, and be governed by what they see, they would be spared many a slip and tumble into pitfalls that the ones in advance of them are just drawing themselves away from.

The times want scholars—scholars who shall shape  
The doubtful destinies of dubious years,  
And land the ark that bears our country's good,  
Safe on some peaceful Ararat at last.

The age wants heroes—heroes who shall dare  
To struggle in the solid ranks of truth;  
To clutch the monster error by the throat  
And lead a universal freedom in.

#### The Correct Thing in Liberia.

In Liberia when a girl is from six to ten years of age she wears on her forearm brass rods, sometimes twisted in a spiral and sometimes bent in separate rings. These are put on half way up to the elbow—put on with a hammer to stay. They are worn night and day until the arms become sore. Then they may be taken off, for the scars will always be there to prove that the girl wore jewelry when she was young. If a woman goes without these marks on her arm it is a lasting source of annoyance to her, the idea being that her mother was too poor to put jewelry on her child. This is a great insult, as they aspire to be considered wealthy. A girl is usually betrothed at seven years of age, and when about ten she is taken to live with her betrothed's people, where she shall be associated with him and learn his ways, for she is supposed to study his wishes and live to please him. A man going to work in the morning is never sure he will find his wife on his return. It is the common thing for her to run away, and she is considered a very queer woman who has not at some time left her husband. When he goes visiting he usually takes her with him, to carry his chair, light his pipe and to make sure of having her when he gets back. After harvest the women go on dancing parties from town to town and are entertained with feasting by their friends. Every town has its head woman, who judges and punishes offenders without asking the advice or consent of the men. The explanation of the custom is "woman is the mother of man, and he ought to listen to her." Some of these women are remarkable orators. The men of a town dare do nothing to which the women seriously object, as they think women have more influence with God and the spirit world.

#### The Care of Brushes.

As hair brushes need to be washed once a fortnight at the least, it stands to reason that unless properly done they will soon be spoiled.

The backs should never be damped at all, and the hand in which the brush is held should be kept as dry as possible.

For washing, dissolve a piece of soda the size of a walnut in a quart of hot water in which you can comfortably bear your hand—or, if you prefer it, you can use a tablespoonful of ammonia instead of the soda. Free the brush from all hairs, and dip it, bristles downward, in and out of the water till it looks clean; rinse by dipping in and out of cold water the same way.

Shake as dry as you can; wipe the back and handle carefully, and dry at once either in open air or before a fire, the former if possible.

If, however, you prefer to give a good clean occasionally, moisten a little whiting with alcohol, and brush the silver with this. Brush out again, and polish with a soft chamois.

The backs and handles of ebony brushes should be rubbed over with a very little boiled linseed oil after washing, and then rubbed with a soft duster till every vestige of oil is removed. Special care is needed in cleaning silver initials on these, and only very slightly moistened whiting should be used, or it is apt to leave a nasty white mark on the wood, which is extremely difficult to remove.

Long handle ones should be hung up by the heads, and short ones either propped upright on a shelf or suspended by a piece of twine. Hearth brushes will last nearly as long again if they are kept hung up.

For cleaning household brushes make a solution of soda by dissolving one pound in one quart of water. Stir over the fire till dissolved, then bottle for use. Add one tablespoonful to a quart of water; wash the brushes in this, using also a little soap for the soft hair ones; rinse in clean cold water and dry in the open air.

Brushes that have been used for paint can be cleaned with turpentine, and spirits of wine will remove varnish.—Selected.

#### The Queen's Kitchen.

"Fifty people are employed in the royal kitchens. When you first open the curious and very ancient doorway you are nearly blinded by the beauty and brilliancy of the copper pots and pans and "batterie de cuisine" which entirely encircle the kitchen. At each end are enormous roasting ranges, shallow but fierce with jacks and spits complete. I have no words to convey the vast extent of the great dripping pan—I say pan, not pans, as only the one great range in the west end is in ordinary use. The meat screen is enormous, dating from the time of Henry VII, oak, lined with metal and with the Tudor badge, the portcullis and arms of the reign, as ornamentations.

"There is no smell of cooking. The roof is vast and moreover—all honor to the chef—there is no noise. The work goes by magic. Why one cook darts at a spit at a certain moment and takes off one joint and leaves two on the spit is a mystery so far as I am concerned.

"Each dish or set of dishes have their own exact place on the serving table. The queen's serving table is a dream of magic. The rim is brass, the whole table hollow steel, the legs hollow. Steam keeps it very hot. An immaculate cloth covers it. The dishes rest here till each server arrives to take the course. There is actually no waste in this kitchen. A curious old custom arranges for that by what are called 'The Queen's Pieces.' Certain tickets are given to the very poor, and they have the privilege of presenting themselves every morning at the castle kitchen door for the portions of food which are wasted at many other establishments."

#### South African Women.

A niece of President Kruger, Sannie Kruger, who was in this country at the outbreak of hostilities, is typical of the South African women, and though educated in France and Belgium, she spent her childhood on the veldt and farm of her native country. In her own picturesque words she recently thus expressed herself, which will show something of the kind of life a Boer girl must lead: "Like all Boer girls, I am an excellent shot. From sheer necessity we have all been obliged to learn how to shoot, and one of the first perquisites of our education is to hit a bull's eye at long range. Our cunning with the gun has been handed down to us through generations. When trekking on the veldt it often fell to the women to keep the prowling lions away from the wagons, and in time of war our women stand behind the laager or barricade, as the case may be, load the guns, tend the wounded and, if needed, take a hand in the shooting also."—Collier's Weekly.

J. W. BOOKWALTER, in his "Through Siberia," says: "Speaking of horses, there is a notable law in effect in most of the large Russian towns concerning them that deserves special mention. Among the curious things that arrest attention on arriving in Moscow is the entire absence of whips among the drivers of cabs, carriages and all sorts of vehicles. On inquiry I was informed that there was a law prohibiting their use. I don't believe there is a single whip in use in Moscow. The excellent condition of the horses attests the benefit of this humane law. Nothing can exceed the beauty of the sleek and well-groomed horses used in the carriages of Moscow."

SELFISHNESS is a great cause of loneliness. If a man builds walls around himself, so that he may keep all that he has to himself, he soon finds that he has built walls around himself which shut out all that might come in to him from others. So the cure of loneliness may be the overcoming of selfishness. The medicines for this disease of loneliness are generosity, thoughtfulness for others, and self sacrifice, taken in large doses. Even when the loneliness comes from the bitterness of loss and sorrow, forgetting self, going out of self and doing for others, is the only cure for its healing.

### DOMESTIC ECONOMY.

#### Hints to Housekeepers.

Brass utensils can be kept bright by occasional rubbings with salt and vinegar.

Hot bread will cut as well as a stale loaf if the blade of the bread knife is heated. Hot bread is, by the way, better broken.

Chloroform rubbed on a mosquito bite will cause the pain and itching to disappear like magic, while the swelling will rapidly decrease.

Screens of wicker have shelves and pockets for work or books, and big chairs of the same material have shelves on the outside, where the lounge can collect his or her belongings, to be reached without moving.

Spring cabbage should receive a cordial welcome. There are few other vegetables from which we gain so many of those valuable phosphates needed for the enrichment and purification of the blood. Some care is wanted in cooking cabbage, so that these phosphates shall not be lost or dissipated in the water when it is boiled, and, indeed, it is better to only parboil it, then to finish its cooking in another vessel by adding a little butter and leaving it to cook through its own steam. A little cream will then transform this into "ladies' cabbage"—a most dainty dish.

A good recipe for making beef tea is as follows: Take one pound of the round of beef, remove all fat and chop very fine. Cover with one pint of cold soft water and place it where it will slowly heat. It is best to allow it first to stand for about an hour before beginning to heat. Stir continually until it reaches 165°; strain through a colander, and not through a fine strainer. If care is taken in the preparation the tea may be served at once, but it is better to allow it to stand for some hours in the cold, to permit the grease to rise. This should be removed with a clean piece of blotting paper. In reheating care should be taken never to let the temperature of the tea rise above 165°, as, if it approaches boiling or passes the coagulating point of albumen, it is spoiled. When given to the patient, as is often necessary, several times a day, the flavor of the tea should be varied by means of vegetables, bay leaves, etc., straining them out after the tea is heated.

#### Domestic Hints.

CAVIARE CANAPE.—Mix two tablespoons each of olive oil and lemon juice, and a shake of cayenne with four tablespoons caviare paste, and beat it thoroughly. Spread it on thin buttered bread without crust, put together and cut into long strips.

FILLING FOR COCONUT TARTS.—Cook in top of double boiler, for about ten minutes, a cup of milk and a quarter of a pound of freshly grated coconut, then cool. Beat two eggs and a quarter of a cup of sugar until light, add a teaspoon of cracker dust to the cooled mixture and flavor with vanilla. Fill into small patty pans, lined with pie crust, and bake in a moderate oven.

BOILED ICING.—Boil one-third cup boiling water and one cup granulated sugar, without stirring, until the syrup will thread from the end of a skewer. Have ready the white of one egg beaten stiff, pour syrup on gradually, beating at the same time; add two teaspoons lemon juice, and beat until stiff enough to spread with broad knife.

CUSTARD PIE.—Beat yolks of three eggs slightly, and whites till foamy, add three rounded tablespoons of sugar, one-fourth teaspoon of salt, and, if you like, one-fourth teaspoon of nutmeg; mix well and pour on three cups of new or unskimmed scalded milk. Strain into a deep plate lined with plain paste. Bake slowly. When it puffs insert a thin knife blade and, if it comes out clean, the pie is done. To have a fine, foamy, brown crust on top of the custard, instead of one that is pale yellow or blistered in patches, beat whites of the eggs separately until foamy, not stiff, and mix them in just before the custard is strained.



## THE VETERINARIAN.

Answers by Dr. Creely.

### AN INJURY TO THE STIFLE JOINT.

TO THE EDITOR:—I had a valuable mare bred to a French coach stallion, weight 1400 pounds; mare, 1070 pounds. She got hurt or strained during the service. She showed lameness in stifle joint. A D. V. S. at Santa Rosa blistered her on the stifle joint twice, but it seems to have done no good. I have used other medicines, but no satisfactory results. Her hip bone is becoming very prominent and the flesh is sinking away on her quarter; she has got very poor, in spite of grain, mashes and good pasture during the day. She lifts up her leg naturally in walking, but she will stand in stall or pasture fifteen minutes at a time with her leg up. The mare is not with foal.—WALTER ARMSTRONG, Sebastopol.

It is an injury or hurt of the hip or stifle joint. Treatment as a rule is not satisfactory; but hip and stifle setons may work wonders. Consult the nearest qualified veterinarian.

### TREATMENT FOR TICKS.

TO THE EDITOR:—Can Dr. Creely tell me through the PACIFIC RURAL PRESS what to do for a dog troubled by what I suppose to be ticks? They are small and black and bury themselves under the skin, raising small, roundish, hard bunches. These the dog scratches and bites open, making raw places all over himself.—A CONSTANT READER, Corona.

Scrub thoroughly once daily with 5% creoline.

E. J. CREELY, D. V. S.  
510 Golden Gate Avenue, S. F.

## THE APIARY.

### Artificial Foundations.

The Colorado Experiment Station has made a series of trials on the use of artificial foundation for comb, which are reported in Bulletin 54. The custom is to furnish the bees a small piece of wax as a starter, upon which they build. It has been a mooted question whether the bees used this wax to extend the comb; whether they used the foundation to build cell walls, or left the foundation as furnished them. Prof. Gillette ingeniously used wax colored by lamp-black, and could thus trace the changes made by the bees. They had no prejudice to the color, and worked with the wax freely. The following is a summary of the more important conclusions:

Bees use freely the wax in foundation to extend both the midrib and the cell walls of honey comb.

The heavier the foundation used, the heavier, as a rule, will be the comb built upon it.

If the midrib of a foundation is much lighter than that of the natural comb, the bees are likely to strengthen it by adding wax to the bottom of the cells. Possibly this is only done where there are actual perforations of the comb.

If the midrib of the foundation is thicker than the midrib of natural comb, it will result in a comb with a midrib thicker than the natural. Or, to state it differently, the bees will not thin the midrib of a foundation down to the thickness of worker comb built in the natural way.

Midribs of foundation that are not more than .17 of a millimeter (.007 inch) in thickness, are thinned little or none by the bees.

Drone comb has a thicker midrib and heavier cell walls than worker comb.

A foundation with a heavy midrib and very slight cell walls will still produce a comb with heavy cell walls.

Very high cell walls in foundation are not cut down to the thinness of cell walls in natural comb.

The thin and extra thin and the "1899" deep-cell foundations produce a comb that approximates very closely the lightness of that which is naturally made by the bees.

When heavy foundations are used, the extra weight of the comb built upon them is due more to the extra weight of the cell walls than to the heavier midrib.

When very light foundations are used, the somewhat heavier comb is due al-

most entirely to the midrib being heavier than that of natural comb.

When foundations containing an abundance of wax to build the entire comb are used, the bees still add much more wax, sometimes nearly enough to build the comb without the help of the wax in the foundation.

Wax seems to be given with the best economy when the midrib of the foundation is of the thickness of the midrib of natural comb, and when there is a small or, at most, a moderate amount of wax in the cell walls.

Poorly attached combs in sections seem to be more the result of weak colonies and poor honey flow than to the kind of starter that is used, though large starters and strips of foundation in the bottom of the sections do help to strengthen the union of comb to the section.

Separators between the sections are essential to the best results in producing comb honey.

The thicker the comb, whether natural or artificial, the greater the proportion of honey to wax in it.

In natural worker comb, 1 inch thick, the proportion of wax to honey is between 1 to 20 and 1 to 25 by weight.

### Alum Baking Powders.

#### Congress Acting to Suppress Their Sale.

The report of the Senate Committee on Manufactures upon the subject of food adulterations and food frauds has created a sensation in Congress and awakened great interest throughout the country.

If there could be published a list of the names of all articles of food found by the Committee to be adulterated or made from poisonous ingredients, it would be of inestimable value to the public.

The recommendations of the Committee that the sale of alum baking powders be prohibited by law will make of special interest the following list of names of baking powders containing alum sold in this vicinity:

#### Baking Powders Containing Alum.

K. C. ....	Contains Alum
Manf. by Jaques Mfg. Co., Chicago.	
CALUMET. ....	Contains Alum
Manf. by Calumet Baking Powder Co., Chicago.	
HOME. ....	Contains Alum
Manf. by Home Baking Powder Co., San Francisco.	
BEEHIVE. ....	Contains Alum
Manf. by Washington Mfg. Co., San Francisco.	
CLOVER LEAF. ....	Contains Alum
Manf. by Pacific Mfg. Co., Los Angeles.	

It is unfortunate that many manufacturers of alum baking powders, even some in the above list, falsely state that their powders do not contain alum. It is only right that consumers should have correct information as to the character of every article of food offered to them.

### U. S. Beet Sugar Acreage and Crop.

Willet & Gray's Statistical Sugar Trade Journal has prepared the following estimate, based on information received from the best sources, showing the acreage of sowings and the possible tonnage of beets and yield of sugar, by States, of the crop of 1900. Allowance is made for partial failures of many inexperienced growers and from the serious blight resulting from the dry weather in California:

States.	Sowings. Acres.	Beets. Tons.	Sugar. Tons.
New York..	6,500	50,000	4,500
Illinois....	3,700	34,000	3,000
Ohio.....	2,700	24,000	2,000
Michigan..	39,000	312,000	28,000
Minnesota.	3,000	30,000	3,000
Colorado..	10,800	92,000	9,000
Nebraska..	9,000	81,000	8,000
Utah.....	11,200	112,000	12,000
Oregon....	2,400	20,000	2,000
Washington	1,400	12,000	1,200
California..	42,300	294,000	32,300
Total.	132,000	1,061,000	105,000

The actual yield may show somewhat reduced figures, unless weather conditions throughout the remainder of the season should prove to be exceptionally

favorable. No beets were planted in New Mexico this year. There are six new factories building this year, the output of which being included in the above estimate. The total production of American beet factories last campaign was 72,944 tons.

### Sugar Beet Acreage in Europe.

Consul Diederich writes from Bremen to the State Department that the International Union for Statistics on Sugar has just published the following statement as to the number of acres that have been planted with sugar-beet seed:

Country.	1899. Acres.	1900. Acres.	Increase. Per cent.
Germany....	1,057,939	1,090,521	3.1
Austria-Hun.	804,063	839,151	4.4
France.....	626,480	685,391	9.4
Russia.....	1,261,614	1,356,075	7.5
Belgium.....	158,235	170,028	15
Holland.....	109,703	112,878	2.9
Sweden.....	65,238	71,271	9.2
Denmark.....	34,594	34,594	....

From the foregoing it will be seen that the increase in acreage over last year is comparatively small, with the exception of Belgium, which shows an addition of 15%.

### A Curious Custom.

If a Russian girl wishes to study at any of the universities which now admit women, etiquette does not allow her to do so until she is married, so she goes through the civil ceremony of marriage with a man student, whom very probably she has never seen before, and this marriage is quite legal, though perhaps, they may never speak to each other again, says McCall's Magazine. On the other hand, if they like each other, and wish it, they are married for life; if they don't the marriage is dissolved when their university course is run, and they are free to marry someone else.

The celebrated mathematician, Sonya Kovalevski, whose autobiography attracted so much notice a few years ago, and who was as phenomenal a Russian girl as Marie Bashkirtseff, went through one of these marriage ceremonies with a student whom she then saw for the first time, and who afterwards became her husband.

### Grape Fruit.

Grape fruit is coming into use more and more as an anti-malarial, says an exchange. Physicians claim that a grape-fruit eaten daily will do much to keep a person in excellent physical condition. It is also useful in some fevers, but should be taken in these cases only on advice of a physician. Unlike most medicines the grape-fruit is widely popular at both teas and luncheons. The bill of fare of an elaborated luncheon frequently starts with grape fruit, cut in the shape of baskets with one-half of the pulp removed and the skin cut with the scissors to form a handle. The seeds are removed and powdered sugar sprinkled over the fruit, or a lump of sugar inserted. One or two candied cherries in the basket contribute a pretty touch of color.

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## THE DAIRY.

### Silos and Silage in Sonoma County.

The Two Rock region of Sonoma county has probably more silos within a given area than any other region of the State. It is also a pioneer region with the silo, for Mr. A. P. Martin built one there fifteen years ago, has had it in use ever since and has built others, as has been noted in his essays at the Dairy Association meetings, which have been published in the PACIFIC RURAL PRESS. Recently S. E. Watson of the Western Creamery has had a run through the Two Rock district and has prepared an interesting sketch of the local experience with the silo. He found that a few did not favor this method of producing dairy food for one reason or another, but the prevailing opinion seems to be very strongly in its favor. We shall take from Mr. Watson's notes and descriptions what seem to us the most pertinent parts.

**THE POSITION.**—The consensus of opinion throughout the valley was on the side of the silo, and several who had used it the longest stated that they would under no circumstances dispense with its use. The farms of the most successful users are hilly and well drained, with warm exposure to the sun. On the valley bottom there is liability to heavy frost about the time the corn is in condition to cut, which is an element of risk fully considered. The opponents of the system are confined to these valley farms, so far as investigated. When the question of growing corn in the hilly country around Petaluma was first agitated in connection with silage, it seemed natural that the low land would be selected as the best corn ground, but the reverse is true. On the highest hills the crop is the heaviest and safest from a nipping frost. The soil holds moisture within an inch of the surface on the driest looking hillsides in early June, and corn will sprout there in two days and show above the ground 3 inches in eight or ten days. It must be remembered that this is near the coast, with chilling winds from the ocean, in unsheltered localities.

**PLAN OF BUILDING.**—There is but one style of silo in the valley, though dimensions vary. The usual diameter is 14 to 16 feet, according to the size of herd. The height is 30 feet and over when outside of barn; inside the barn they run as high as roof. Sometimes twin silos occupy the end of barn, and in a few instances one is at each end. There seems to be no special reason for putting them in the barn, except that they are sheltered from sun and rain, with the cost of roofing saved. The prevailing method of building was described by Walter Church, who has built most of them, as follows:

"The silo is 30 feet high and 14 feet in diameter. Will hold at 40 pounds to cubic foot ninety tons of corn silage; 30 to 35 pounds of silage is a good average feed per cow per day. Silo is constructed with a circular cement wall 1 foot high (on level ground) and 10 inches thick, requiring one barrel cement. Studding are full 30 feet, 2x4 set on circle on top of cement wall. Studding set 12 inches from center to center, requiring forty-four for 14-foot silo. Another circle on top of studding to hold them in place, and also forms plait for rafters. Walls are covered inside with two courses 1x16-inch boards, with a lining of good building paper between each course of boards, put on so as to break joints. Roof is octagon, with filling window built in one section, like dormer, 3 feet wide by 3½ feet high. The cost of construction depends on the cost of lumber in different localities. The amounts required, exclusive of staging, are about: forty-four 2x4 30-foot studdings, ten 2x4 18-foot rafters, two circles 14 feet inside, 200 feet sheathing, fourteen bundles shingles, 1320 square feet building paper, 2850 feet 1x6-inch boards, one barrel cement, some 4d. and 6d. nails.

"The silage is run in barn on car, which carries it directly in front of

cows, who are arranged on either side of barn."

**FEEDING SILAGE.**—T. G. King, proprietor of the Valley Creamery and lessee of a large dairy farm, writes as follows: "We have in our neighborhood about forty silos. In almost every case the silo is regarded as a good milk producer and a good thing for the dairyman's pocket. When we first began to feed silage we had trouble galore with its effect upon butter. Almost every person who had a silo was feeding from forty to fifty pounds per day to the cow while milking, and when the air was also full of the silage odor. The milk itself smelled like a silo, and something had to be done. We sent for literature of experience in Eastern localities, and, after a study of the question, advised all the silage fed to about thirty pounds; to feed after milking, ventilate barns, etc. There was a marked change in the milk and we had no more complaints from our commission men. Our butter was first-class after that, nor have we had complaints on account of silos since.

"Those who have enough silage to supply them through dry seasons always bring a good amount of milk to the creamery the year round, and, I notice, generally receive the largest check at end of month.

"I believe the silo will make it possible for us to milk our cows the year round, if we desire, instead of six or seven months, as formerly. I think the silo has come to stay."

**G. W. GASTON'S EXPERIENCE.**—Mr. Gaston was one of the first dairymen to follow the example of A. P. Martin, after the advantage of the silo had been demonstrated. As his experience covers four years of successful use of the method, what he says may be regarded as of the greatest value to those who want safe advice in adopting the use of silos. Mr. Gaston writes as follows: "I built my silo in the summer of 1896. It is built circular in form, is 30 feet high, 16½ feet in diameter, inside measurement. For foundation I used concrete, letting it extend 2 feet below the surface of ground and 6 inches above. This foundation wall is 1½ feet thick. On this I laid a circular sill 2x4, and on to this for frame I nailed my studding, which were of 2x4, placing them 1 foot apart. For lining I used boards 6 inches wide and ½-inch thick, using a double course of boards inside, with a layer of heavy P. & B. paper between the boards. For outside lining I used the same kind of boards, but only one course. I can not say whether this outside lining is necessary or not; but I think it better to have it where the silo is built outside the barn, as mine is. I have my silo built at the end of my barn and in line with the managers, where the cows are fed, thus enabling me, by the use of a feed box put on small car wheels, to carry my feed and distribute it without much labor.

"The bottom of silo is not floored, and I think it is much better not to be, if your foundation wall is deep enough in the ground to keep out the rats and gophers. My ensilage always keeps as well and is as good at the bottom where it comes in contact with the ground as it is anywhere else in the silo.

**GROWING THE CROP.**—As to planting, most all have different opinions, but my experience teaches me that the best time to plant is about the middle of May, if the location and the condition of the ground will permit. By planting at this time it enables you to harvest your corn crop before it gets so late and you are not so much in danger of being caught by rainy weather, and, furthermore, you will have time to seed your land to grain, if you so desire. I have planted my corn in different ways—sometimes drill and sometimes check-row—in order to cultivate both ways. From what little experience I have had I prefer the drill corn, as I think you obtain more and better fodder, and as much or more grain to the acre than that planted in hill, for this reason: The stocks do not grow so large and coarse, there are more stocks in a given amount of space, and, I think, more grain. It is true the ears of corn are not so large, but each stock has a small ear of corn, and there being so many

more stocks, I think you will have more pounds of grain. If your land is very foul, you will have a little more labor to keep the land clean when planted in drill. But what of that? In my estimation, you get enough more feed to pay you several times over for extra labor.

**"THE CORN.**—I have mostly planted the yellow dent corn, large variety, and think it the best. I tried some sweet corn one season. I found it made very good ensilage, but not enough better than the other to justify planting it, as the yield was very much less per acre. I try to cut my corn just as the grain begins to harden—that is, a little past roasting ear stage—and have found by experience that it makes the best silage; not that it keeps any better, or that the cattle eat it more readily, but it gives better results in milk. I have a small power and cutter, and can fill my silo just when I think the corn is ready. This last season it cost me 50 cents a ton to harvest my corn crop and put it in the silo. Some seasons it has cost me a little more than this, but what of that? You still have a much cheaper and better feed for the cost of it than you can obtain otherwise. I can say from experience, and I think I have tested it pretty thoroughly, that two tons of good silage is equal in feeding value to one ton of good oat hay.

**"THE LAND.**—Take one year with another, on average land in our locality, without fertilizers, you can count on a corn crop averaging from eight to twelve tons per acre where the same kind of land under the same conditions will average from 1¼ to 1½ tons of grain hay to the acre. Another thing in favor of raising corn is that most of our land has been farmed continually for a number of years and needs rest or some kind of fertilizer, and by following a corn crop with a crop of grain you get twice and often three times the crop of grain you would get if farmed to grain continually.

"When you harvest your crop of corn your land has been pretty thoroughly cultivated and ready to plant to grain with little cultivation. I here consider you are gaining both ways: first, more feed; second, larger and better crops of grain.

**"THE YIELD.**—As to silage for feeding purposes, as I have stated above, you can produce so much more feed to the acre that you are able to keep a greater number of cattle on the same amount of land. Before I built a silo I used to cut and put away about 1¼ tons of hay for each cow I milked, for winter feeding, in addition to their pasture, and would realize from 160 to 180 pounds of butter per year from a cow. Since I have had the silo I am enabled to keep one-third more cows on the same amount of land and realize from 280 to 290 pounds of butter a year per cow, with the same grade of stock as I had before I built the silo. You can here see a gain of 100 pounds of butter per cow and also a gain in stock of one-third.

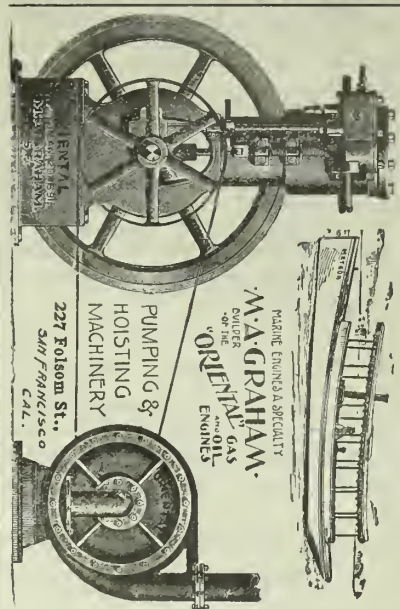
"In winter, from December to March, I do not let my cows run on the pasture to tramp it, thus making better pasture in the spring of the year. I keep my cows shut in a small lot, large enough that they can have plenty of exercise, and they get nothing to eat but what they are fed, which is forty pounds of good silage a day, ten pounds of grain (mill feed) and what straw they will eat, which is very little. Last winter my cows averaged nearly as well in milk as they did in March and April on pasture.

"Another advantage in feeding silage and having your cows milking during the winter months is that they are in good condition in spring of year when pasture does come, ready to milk good all the time. If you have a cow that is not milking satisfactorily, you can dispose of her to the butcher without having to give her much extra feed, and in most cases not any. From what experience I have had with feeding silage I would not feel satisfied to attempt dairying unless I had a silo.

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## Uncle Sam's Balance Sheet.

The commerce of the United States in the fiscal year which ends with this month will by far exceed that of any preceding year; its exports will surpass those of any earlier year by more than \$150,000,000, and its exports of manufactures will exceed those of any preceding year by more than \$75,000,000. Its imports, owing to the demands of the manufacturers of the country for foreign raw material for use in their industries, will also be large. Raw silk, unmanufactured fibers, crude rubber, hides and skins, pig tin for use in tinplate establishments, cabinet woods and the finer grades of cotton and the coarser grades of wool all show a large increase as compared with preceding years. The value of unmanufactured silk imported will be nearly 50% in excess of that of the preceding year and more than double that of the fiscal year 1897. Raw cotton shows an increase in quantity of 50% over 1899, unmanufactured fibers an increase of 25% over 1899 and 100% over 1898; and hides and skins show an increase of 25% over 1899 and 60% over 1898.

It is on the export side, however, that the year makes its greatest record. The total exports for the eleven months of the year amount to \$1,286,214,534, and should the June figures prove as large as those of May, which are just received, it would bring the total up to \$1,400,000,000, or \$173,000,000 greater than the banner year 1899.

As to the details of this wonderful year, every class of articles shows an increase. Manufactures, as already indicated, will show an increase of more than \$75,000,000; products of agriculture will show an increase of nearly \$50,000,000; products of the mine, an increase of nearly \$10,000,000; those of the forest, about an equal sum; fisheries are \$2,000,000 larger than last year, and the miscellaneous class shows a marked increase.

## Feeding Green Alfalfa in Kansas.

D. H. Otis of the experiment station, Manhattan, Kansas, gives a note on alfalfa feeding which may interest some of our alfalfa growers. During the summer of 1899 the Kansas Agricultural College fed ten head of cows on green alfalfa for a period of seventy-four days. During this time they received 77,145 pounds of alfalfa and 1623 pounds of corn and kafir cornmeal. On account of other experimental work, it was impossible to retain the same field of alfalfa through the entire period, and consequently they could not measure the area used; but figuring on the basis of dry matter produced, and comparing it with the amount produced by an average yield of four tons of well-cured hay per acre, they find that it took 2.97 acres to keep ten cows seventy-four days. During this time these cows yielded \$85.69 worth of butter fat and skim milk. The grain cost \$10.65. This leaves \$75.04 to be credited to the green alfalfa, amounting to \$1.95 per ton, or \$25.26 per acre.

Green alfalfa is relished by the cows, and a field can be kept in good condition for feeding during the whole summer. Where pasture is abundant it will doubtless not pay to feed green alfalfa; but where pasture land is scarce, or the grass becomes short or dry, green alfalfa furnishes an excellent feed, and will not only keep up the flow of milk for the time being, but will help materially to maintain a large flow through a longer period of lactation. Pasturing alfalfa will sometimes cause

\$100 Reward, \$100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

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cows to bloat. They did not have a single case of bloat from cutting alfalfa and feeding it green.

## Soil Studies in Other States.

There is about to be issued Report No. 64 of the U. S. Department of Agriculture, entitled "Field Operations of the Division of Soils, 1899," containing 198 printed pages, 19 text figures, 29 plates and 11 large colored maps. The maps are all on a scale of 1 inch to the mile. The series includes a soil map of a portion of the Connecticut valley covering about 256,000 acres; soil, alkali and underground water maps of about 160,000 acres in Salt Lake county, Utah; soil, alkali and underground water maps of about 38,000 acres around Carlsbad, in the Pecos valley, New Mexico, and a similar set of maps for about 30,000 acres around Roswell, in another portion of the same valley. The report describes the character of the soil and the relation of the soil of the Connecticut valley to tobacco and other farm crops; in the western districts the kind and amount of alkali, the treatment necessary to prevent injury from the rise of alkali, and the methods of reclaiming land already injured by alkali and seepage waters. Application for this report should be made at once to a member of Congress or to the Chief of the Division of Soils, U. S. Department of Agriculture.

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### List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
PIONEER PATENT SOLICITORS  
FOR PACIFIC COAST.

FOR THE WEEK ENDING JULY 3, 1900.

- 652,880.—GAME—J. W. Batdorf, Hollister, Cal.  
653,057.—MAIL BAGS—C. Bateman, Gales Creek, Or.  
652,882.—CART—Y. H. Boudreau, Modesto, Cal.  
652,911.—CONVEYOR AND ELEVATOR—G. E. Bowers, S. F.  
652,889.—SURGICAL PAD—Tillie Campbell, Oakland, Cal.  
653,166.—BUNSEN BURNER—H. B. Cary, Los Angeles, Cal.  
653,000.—BOILER BRACE—P. F. Dundon, S. F.  
652,842.—CULTIVATOR—Grimm & Fullerton, Oakesdale, Wash.  
652,895.—FUEL ECONOMIZER—J. H. Hobart, El Paso, Texas.  
652,794.—COUPLING BOLT—E. L. Lowe, S. F.  
653,198.—WEIGHING MACHINE—S. P. Mackey, Ridgefield, Wash.  
652,853.—CULTIVATOR—W. F. Magill, Dufur, Or.  
653,143.—HOSE COUPLING—J. C. Martin, Spokane, Wash.  
653,109.—WINDMILL—Moore & Cook, Eureka, Cal.  
652,900.—GOLD SAVING MACHINE—R. H. Postlethwaite, S. F.  
653,040.—GAS ENGINE—T. B. Rouse, San Miguel, Cal.  
652,926.—SOUND TRANSMITTER—C. Salmon, S. F.  
653,157.—TROUSERS—W. G. Turner, French Camp, Cal.  
652,871.—PLOW—A. V. Wilbur, Stockton, Cal.  
653,052.—CULTIVATOR—F. A. Youngberg, Garfield, Wash.  
32,893.—DESIGN—S. A. Andrews, Tacoma, Wash.

### Notices of Recent Patents.

Among the patents recently obtained through Dewey, Strong & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

**WEIGHT MEASURER AND CUTTER FOR CHEESE.**—No. 651,507. June 12, 1900. Louis Lacaille, Golden Gate, Cal. This invention relates to a device for accurately measuring the sizes of cuts so that by such measurement the cheese may be cut to the exact weight called for by the customer. It consists of a cheese case composed of two hollow semi-cylindrical segments, each formed with closed ends, one segment, being turnable within the other. Means are provided for fixing the outer segment upon which the cheese is supported concentrically with said bottom and turnable therewith. A knife having one end fulcrumed near the center of the top of the case is movable in a radial slot in the bottom of the outer segment and adapted to swing downwardly to cut through the cheese. Around the periphery is supported a scale which being applied to the cheese, shows the weight of any particular measurement upon the scale after the unit of any particular size of cheese has been ascertained. It enables the seller to exactly measure the size of the cut to correspond with the weight desired.

**SURGICAL PAD.**—No. 652,889. Dated July 3, 1900. Tillie Campbell, M. D., Oakland, Cal. This invention relates to a pad which is especially designed for obstetrical and surgical operations. It consists of a base having a surrounding hollow rim, with means for supplying hot water to fill and warm the apparatus, a drainage canal connecting with the front, and longitudinally disposed seams with intermediate ridges which form independent drainage channels to conduct away any liquid to the drainage canal. This seems to answer the double purpose of preventing the central part from rising up like a cushion, and also to form drainage channels connecting with the single receiver and discharge tube. Exit passages discharge the water from the pad, and it may be gradually discharged, while a new supply is admitted from the fountain.

**REGULATING DEVICES FOR RIDING CARTS.**—No. 652,882. Dated July 3, 1900. Y. H. Boudreau, Modesto, Cal. This invention is designed to relieve the disagreeable movements of two-wheeled carts, which are drawn by a single horse, and to prevent the jerk caused by sudden starting or stopping of the animal, and also to reduce the tilting of the cart body in going up or down hill. It comprises a bent or crank axle, upon the central portion of which the vehicle body is supported, the

upwardly and outwardly turned ends forming the wheel spindles. Clips are fixed to the axles between the wheel spindles and the crank portion, and fulcrum pins extending through the upper parts of the clips support the shaft by which the vehicle is drawn. Rigid bars are clipped beneath the axle extending parallel to and beneath the shafts, and springs are clipped between the axle and these rigid bars, having their ends upturned to form elastic contacts with the lower part of the shafts on each side of the axle. Plates are hinged beneath the shafts and form connections between the shafts and the spring ends.

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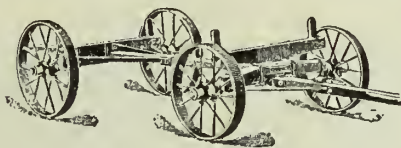
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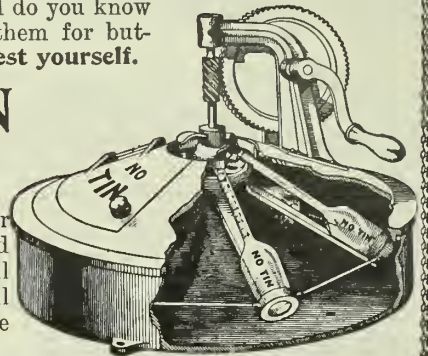
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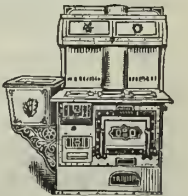
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**Dewey, Strong & Co., Patent Agents,**  
330 Market Street, San Francisco, Cal.



## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, July 18, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	July.	Sept.
Wednesday.....	79 1/2 @ 81	81 1/2 @ 83
Thursday.....	80 1/4 @ 78 3/4	81 1/2 @ 80 1/4
Friday.....	79 1/2 @ 77	80 3/4 @ 79
Saturday.....	76 3/4 @ —	79 1/2 @ 77 1/2
Monday.....	76 @ —	76 1/2 @ 78
Tuesday.....	76 1/2 @ 76	75 1/2 @ 77 1/2

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	July.	Sept.
Wednesday.....	-s -d	6s 4 1/2 d
Thursday.....	-s -d	6s 3 1/2 d
Friday.....	-s -d	6s 3 1/4 d
Saturday.....	-s -d	6s 2 1/2 d
Monday.....	-s -d	6s 1 1/2 d
Tuesday.....	-s -d	6s 1 d

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec., 1900.	May, 1901.
Thursday.....	1 16 1/2 @ 1 15 1/2	— @ —
Friday.....	1 14 1/2 @ 1 14 1/2	— @ —
Saturday.....	1 13 1/2 @ 1 13	— @ —
Monday.....	1 12 1/2 @ 1 13 1/2	— @ —
Tuesday.....	1 12 1/2 @ 1 13 1/2	— @ —
Wednesday.....	1 13 1/2 @ 1 12 1/2	— @ —

## WHEAT.

The bears in the wheat market, being principally the gamblers on the inside, who aim to and as a rule de-fatten off the victims who go "long" in the speculative market from the outside, get in some of their deadly work again the past week, causing futures to break seriously, thus scorching many a poor innocent who bought wheat on small margins during the recent excitement. As soon as the present crop of longs is wiped out prices on the Chicago Board, the center of grain gambling, may be again rushed up, under some pretext or another, by means fair or foul, to bait a new lot of victims. The wheat crop in the Dakotas and Minnesota, which a few weeks ago was placed as low as 50,000,000 bushels, with no lack of argument that it could not greatly exceed this amount, was the past week prophesied to exceed 135,000,000 bushels, in articles written in the interest of the bear gang. Call Board prices here declined correspondingly with Chicago, but spot wheat was not offered in this center at materially lower figures than last quoted, especially in noteworthy quantity, although the acceptance of considerably lower figures than were nominally current would have been necessary to have effected free sales. The world's visible supply showed this week a decrease of 2,921,000 bushels.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, \$1.16 1/2 @ 1.12 1/2.  
May, 1901, delivery, \$— @ —c.  
Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at \$1.13 1/2 @ 1.12 1/2; May, 1901, — @ —.

California Milling.....	\$1 10 @ 1 13 1/2
Cal. No. 1 shipping, alongside.....	1 05 @ 1 07 1/2
Oregon Valley.....	1 05 @ 1 07 1/2
Washington Blue Stem.....	1 07 1/2 @ 1 12 1/2
Washington Club.....	1 02 1/2 @ 1 07 1/2
Off qualities wheat.....	1 00 @ 1 02 1/2

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-1900.	1900-01.
Liv. quotations.....	6s 1 1/4 d @ -s-d	6s 3 1/4 d @ 6s 4 d
Freight rates.....	32 @ -s	— @ 40s
Local market.....	\$1 05 1/2 @ 1 11 1/2	\$1 05 @ 1 07 1/2

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

The recent sag in wheat naturally imparts a weak tone to the flour market. At no time since the last advance in prices of flour has it been possible to effect any sales of consequence at the new figures. Fortunately for the holding interest, spot supplies are not of heavy volume, but at the same time owners would very much like to reduce stocks if they could do so without making sacrifices.

Superfine, lower grades.....	\$2 25 @ 2 50
Superfine, good to choice.....	2 60 @ 2 80
Country grades, extras.....	3 15 @ 3 40
Choice and extra choice.....	3 40 @ 3 65
Fancy brands, jobbing.....	3 60 @ 3 75
Oregon, Bakers' extra.....	2 90 @ 3 25
Washington, Bakers' extra.....	2 90 @ 3 40

## BARLEY.

In sympathy with wheat, the speculative market for barley has been on the decline during greater part of the past week, and spot market, for same reason,

has tended against sellers. Why prices of this cereal should drop with those of wheat, has never been reasonably explained and never will be, but the controlling element has for years past elected to have it so, and so it is and has been, exceptions to the rule being few and far between. Offerings in the spot market were not heavy at current rates, nor is there likely to be much selling pressure in the near future if prices prove no better than are now obtainable. There is a good export demand for choice new brewing at about 85c.

Feed, No. 1 to choice.....	71 1/2 @ 73 1/2
Feed, fair to good.....	67 1/2 @ 70
Brewing, No. 1 to choice.....	80 @ 85
Chevalier, No. 1 to choice.....	— @ —
Chevalier, No. 2.....	— @ —

## OATS.

The firmness last noted has continued, based largely on the present and prospective requisitions of the Government for this cereal. It was reported that immediate supplies in this center were hardly sufficient for the demands of the Government, to say nothing of other needs. As has been done before, however, part of the Government purchases may be made East rather than pay very stiff prices in this market.

White Oats, fancy feed.....	1 22 1/2 @ 1 25
White, good to choice.....	1 12 1/2 @ 1 20
White, poor to fair.....	1 05 @ 1 10
Gray, common to choice.....	1 05 @ 1 12 1/2
Milling.....	1 20 @ 1 30
Surprise, good to choice.....	1 25 @ 1 35
Black Russian.....	1 00 @ 1 10
Red.....	1 00 @ 1 15

## CORN.

Quotable values and the general condition of the market remain much as previously noted for Yellow, but White is higher. Demand is not active at current rates, but stocks are of quite moderate volume, both of local and imported product, and are being very steadily held, with the bulk of spot supplies in second hands.

Large White, good to choice.....	1 20 @ 1 25
Large Yellow.....	1 15 @ 1 17 1/2
Small Yellow.....	1 40 @ 1 50
Eastern, in bulk (carload lots).....	1 16 @ 1 18

## RYE.

Spot stocks are small, but the demand at full current rates is of a light order.

Good to choice, new.....	92 1/2 @ 97 1/2
--------------------------	-----------------

## BUCKWHEAT.

Virtually none offering at present, and in consequence values for the time being are largely nominal.

Good to choice.....	2 00 @ 2 10
Silverskin.....	— @ —

## BEANS.

Conditions of the market and quotable rates remain much as last noted. Stocks are light in the aggregate and are mainly Lady Washingtons, Bayos and Pinks. Market is steady, previous values continuing to prevail. The crop south will be light, and indications are that the yield on the Sacramento will not be above an average.

Pea, fair to good, 100 lbs.....	3 40 @ 3 60
Small White, good to choice.....	3 35 @ 3 45
Lady Washington.....	2 90 @ 3 05
Butter, small.....	— @ —
Butter, large.....	— @ —
Pinks.....	2 70 @ 2 90
Bayos, good to choice.....	2 85 @ 3 00
Reds.....	3 25 @ 3 75
Red Kidneys.....	— @ —
Limas, good to choice.....	5 25 @ 5 40
Black-eye Beans.....	3 25 @ 3 75
Horse Beans.....	2 25 @ 2 50
Garbanzos, large.....	2 50 @ 2 75
Garbanzos, small.....	2 00 @ 2 25

## DRIED PEAS.

Aside from small holdings in the hands of millers and jobbers, the market is bare. Values are without quotable change.

Green Peas, California.....	2 40 @ 2 50
Niles Peas.....	2 15 @ 2 25

## WOOL.

The local market displays no life worth mentioning, and it now looks as if there would be little or no trading before the fall season. The latter is, fortunately, not very far ahead. While it is discouraging, holders cannot well do otherwise than wait. To attempt to crowd sales at present, would only result in forcing prices to lower levels without any business of consequence being effected.

## SPRING.

Humboldt and Mendocino.....	16 @ 18
Northern, free.....	14 @ 16
Northern, defective.....	11 @ 13
Middle Counties, free.....	14 @ 16
Middle Counties, defective.....	11 @ 13
Southern Mountain, 12 mos.....	8 @ 10
Southern Mountain, free, 7 mos.....	9 @ 11
Southern Mountain, defective, 7 mos.....	8 @ 10
Oregon Valley, fine.....	17 @ 19
Oregon Valley, coarse to medium.....	16 @ 17
Eastern Oregon, choice.....	15 @ 16
Eastern Oregon, fair to good.....	11 @ 14
Nevada, as to condition.....	14 @ 16
San Joaquin Fall Lambs.....	8 @ 9

## HOPS.

The market is extremely quiet, as is generally the case when the season is practically ended, as at this date. In a few weeks new hops will likely put in an appearance, and in about thirty days there should be fairly liberal offerings of current year's crop. Market for new bids fair to open at much the same range of values as lately current on 1899 hops.

Good to choice, 1899 crop.....	7 @ 10
--------------------------------	--------

## HAY AND STRAW.

The firmness last noted in the hay market has not only continued, but has been still more pronounced on best qualities of stable hay, sales of select Wheat being made up to \$12 per ton. Tame Oat was also in good request and brought materially better figures than lately current. Volunteer hay met with poor favor, buyers taking hold slowly and only at low figures. Market for Straw was without appreciable improvement.

Wheat.....	8 00 @ 12 00
Wheat and Oat.....	7 50 @ 11 00
Oat.....	7 00 @ 10 00
Barley.....	5 50 @ 8 00
Volunteer.....	4 50 @ 6 50
Alfalfa.....	6 0 @ 7 50
Stock.....	5 00 @ 6 50
Compressed.....	8 00 @ 12 00
Straw, 3/4 bale.....	25 @ 37 1/2

## MILLSTUFFS.

Most kinds of mill feed were in ample supply for current requirements, quotable rates throughout remaining practically as last noted. The demand was not particularly brisk for any description.

Bran, 3/4 ton.....	12 50 @ 13 00
Middlings.....	15 00 @ 18 00
Shorts Oregon.....	13 00 @ 15 00
Barley, Rolled.....	16 00 @ 18 50
Cornmeal.....	24 50 @ 25 00
Cracked Corn.....	25 50 @ 26 50

## SEEDS.

Stocks are too small at present to admit of other than very light jobbing operations. The little business doing is at practically unchanged values. New crop Mustard is expected on market at an early day. Values for same are yet undetermined.

Mustard, Trieste.....	Per ctl. — @ —
Mustard, Yellow.....	— @ —
Flax.....	— @ —
Canary.....	3 1/2 @ 4
Rape.....	2 @ 3
Hemp.....	3 1/2 @ 4
Timothy.....	— @ —
Alfalfa, Utah.....	— @ —

## BAGS AND BAGGING.

The season's demand for Grain Bags is nearly satisfied, and that there will be a carry-over stock of considerable proportions is now a well established fact. Market is easy in tone, without being quotably lower. Demand for Fruit Sacks has been on the increase, prices for same ruling steady. In other lines in this department there has been little trading and no new features.

Calcutta Grain Bags, buyer June-July.....	— @ —
Calcutta Grain Bags, spot.....	6 1/2 @ —
San Francisco Grain Bags, 22x36, spot.....	6 1/2 @ —
State Prison Bags in lots of 2000, 3/4 100.....	5 65 @ —
Wool Sacks, 4 lbs.....	— @ 32 1/2
Wool Sacks, 3 1/2 lbs.....	— @ 28 1/2
Fleece Twine.....	7 1/2 @ —
Gunnies.....	— @ 12 1/2
Bean Bags.....	4 1/2 @ 5 1/2
Fruit Sacks, cotton.....	6 1/2 @ 7 1/2

## HIDES, PELTS AND TALLOW.

The Hide market is still quiet, with prospects more favorable for prices further receding than improving in the near future. About the best that can be hoped for is stability at current rates. Pelts and Tallow are quotably unchanged, but are not in active request at full figures.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	9 1/2	8 1/2
Medium Steers, 48 to 56 lbs.....	8 1/2	7 1/2
Light Steers, under 48 lbs.....	8 1/2	7 1/2
Heavy Cow Hides, over 50 lbs.....	8 1/2	7 1/2
Light Cow Hides, under 50 lbs.....	8 1/2	7 1/2
Wet Salted Kip.....	8 1/2	7 1/2
Wet Salted Veal.....	8 1/2	7 1/2
Wet Salted Calf.....	9	8
Dry Hides.....	15	12
Dry Kip and Veal, 11 to 16 lbs.....	15	12
Dry Calf, under 4 lbs.....	15	12
Salted Horse Hides, large.....	2 00 @ —	—
Salted Horse Hides, medium.....	1 50 @ —	—
Salted Horse Hides, small.....	1 00 @ —	—
Dry Horse Hides, large.....	1 50 @ —	—
Dry Horse Hides, small.....	75 @ 1 00	—
Dry Colts' Hides.....	50 @ —	—
Pelts, long wool, 3/4 skin.....	1 00 @ 1 25	—
Pelts, medium, 3/4 skin.....	70 @ 90	—
Pelts, short wool, 3/4 skin.....	35 @ 60	—
Pelts, shearling, 3/4 skin.....	20 @ 35	—
Deer Skins, best summer.....	27 1/2 @ 30	—
Deer Skins, good medium.....	20 @ 22 1/2	—
Deer Skins, thin winter.....	— @ 10	—
Elk Hides.....	10 @ 12	—

Tallow, good quality.....	4 @ —
Tallow, No. 2.....	3 @ 3 1/2
Goat Skins, perfect.....	30 @ 37 1/2
Goat Skins, damaged.....	10 @ 20
Kid Skins.....	5 @ 10

## HONEY.

Amber grades are in fair supply, both Extracted and Comb, and there is a moderate business doing in the same at prevailing figures, mostly in a small jobbing way and on local account. Large dealers are purchasing only to fill immediate orders, not caring to stock up at present prices. Water White honey is scarce and in a limited way is salable at tolerably stiff figures.

Extracted, White Liquid.....	7 1/2 @ 8
Extracted, Light Amber.....	7 @ 7 1/2
Extracted, Amber.....	6 @ 6 1/2
White Comb, 1 lb frames.....	12 @ 12 1/2
Amber Comb.....	9 @ 11
Dark Comb.....	6 1/2 @ 7 1/2

## BEESWAX.

Former rates continue in force, stocks being light and market firm. There is no likelihood of values being soon any more favorable to buyers.

Good to choice, light, 3/4 lb.....	25 @ 27
Dark.....	24 @ 25

## LIVE STOCK AND MEATS.

The advanced rates last quoted for Beef are fairly well sustained. Small Veal arrived sparingly; Large was more plentiful. Mutton and Lamb brought fully as good figures as preceding week. Hogs were not in excessive supply; but receipts are on the increase, and lower prices are likely to be soon experienced.

Beef, first quality, dressed, net 3/4 lb.....	6 @ —
Beef, second quality.....	5 1/2 @ 6
Beef, third quality.....	5 @ 5 1/2
Mutton—ewes, 7 @ 7 1/2 c; wethers.....	5 @ 8
Hogs, hard grain fed, medium.....	5 1/2 @ 6
Hogs, small, fat.....	5 1/2 @ 6
Hogs, large, hard.....	5 1/2 @ —
Hogs, acorn-fed.....	— @ —
Hogs, feeders.....	5 1/2 @ 5 1/2
Hogs, country dressed.....	6 @ 6 1/2
Veal, small, 3/4 lb.....	8 @ 10
Veal, large, 3/4 lb.....	8 @ 8 1/2
Lamb, spring, 3/4 lb.....	8 1/2 @ —

## POULTRY.

Arrivals aggregated lighter than preceding week, both of domestic and Eastern poultry. Chickens continued most in request, and for large and fat stock the market was firm at quotations, some of very select quality selling at higher rates than below noted. Geese sold at a slight advance.

Turkeys, dressed, 3/4 lb.....	— @ —
Turkeys, live hens, 3/4 lb.....	10 @ 11
Turkeys, live gobblers, 3/4 lb.....	9 @ 10
Hens, California, 3/4 dozen.....	3 50 @ 5 00
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	4 50 @ 6 00
Fryers.....	3 50 @ 4 00
Broilers, large.....	2 75 @ 3 25
Broilers, small.....	1 75 @ 2 25
Ducks, old, 3/4 dozen.....	3 00 @ 4 50
Ducks, young, 3/4 dozen.....	3 00 @ 4 50
Geese, 3/4 pair.....	1 25 @ 1 50
Goslings, 3/4 pair.....	1 25 @ 1 50
Pigeons, old, 3/4 dozen.....	1 25 @ 1 50
Pigeons, young.....	1 25 @ 1 50

## BUTTER.

There were no excessive stocks of choice to select fresh, but at same time about enough for immediate demand at full current rates. In a small way some favorite marks are bringing an advance of 1 @ 2c. over quotations. There is no scarcity of second grade, either creamery or dairy, and market for such stock is not noteworthy for firmness.

Creamery, extras, 3/4 lb.....	19 @ —
Creamery, firsts.....	18 @ 18 1/2
Creamery, seconds.....	17 1/2 @ 18
Dairy, select.....	17 1/2 @ 18
Dairy, seconds.....	16 1/2 @ 17
Dairy, soft and weedy.....	— @ —
Mixed store.....	14 @ 15
Creamery in tubs.....	19 @ 21
Pickled Roll.....	18 @ 20
Parkin, California, choice to select.....	19 @ 21
Parkin, common to fair.....	17 @ 18

## CHEESE.

Market shows steadiness for domestic product, although buyers are not taking hold very lively at full figures. That easier prices will rule later on is not probable. Eastern markets are decidedly firm and seldom were so lightly stocked at corresponding date.

California, fancy flat, new.....	9 1/2 @ 10
California, good to choice.....	8 1/2 @ 9
California, fair to good.....	8 @ 8 1/2
California Cheddar.....	— @ —
California, "Young Americas".....	9 1/2 @ 11

## EGGS.

Choice to select, direct from hennery or ranch, are ruling higher, with rather light arrivals of this description and prospects of still further decrease in receipts and still stiffer prices in the near future. Off qualities of fresh drag at low figures, cold storage eggs being taken in preference. Offerings out of cold storage are liberal, both domestic and Eastern.

California, select, large, white and fresh.....	19 @ 20
California, select, irregular color & size.....	17 1/2 @ 18 1/2
California, good to choice store.....	14 1/2 @ 16
Eastern, as to section and grading.....	14 1/2 @ 17
Eastern, cold storage.....	— @ —



## VEGETABLES.

All seasonable kinds were in fair to liberal supply, and lack of firmness was a prominent feature of the market, taken as a whole. Onions kept close to figures of previous week, but prices were sustained more through light offerings than active demand. Tomatoes were in decidedly increased supply and sold at a marked decline from figures of preceding week. Corn, Beans, Squash and Cucumbers were all plentiful and cheap.

Asparagus, per box.....	1 00	@ 2 50
Beans, String, per lb.....	2	@ 3
Beans, Wax, per lb.....	2 1/4	@ 4
Beans, Lima, per lb.....	4	@ 5
Cabbage, choice garden, per 100.....	50	@ —
Cauliflower, per dozen.....	50	@ —
Cucumbers, Bay, per box.....	25	@ 40
Egg Plant, per box.....	75	@ 1 50
Garlic, per lb.....	2 1/2	@ 3 1/2
Green Corn, per sack.....	75	@ 1 25
Green Corn, Alameda, per crate.....	1 25	@ 1 50
Onions, Red, Cal., good to choice.....	50	@ 75
Onions, Yellow Danver, per cental.....	90	@ 1 00
Okra, Green, per box.....	1 00	@ 1 25
Peas, Sweet, garden, per lb.....	2 1/2	@ 3
Peas, Green, per sack.....	1 00	@ 1 50
Peppers, Green Chile, per box.....	50	@ 1 00
Peppers, Bell, per lb.....	—	@ —
Rhubarb, per box.....	—	@ —
Squash, Summer, per large box.....	50	@ 60
Tomatoes, per small box.....	30	@ 50
Tomatoes, River, per large box.....	75	@ 1 25

## POTATOES.

Inquiry has been most of the time since last review of much the same slow order as noted in previous report, and in the matter of values there has been no quotable improvement. Only Sacramento River potatoes are now coming forward, but these are in larger supply than required for the immediate demand.

Burbanks, River, per cental.....	35	@ 70
New Potatoes, per cental.....	35	@ 70

## The Fruit Market.

## FRESH FRUITS.

Arrivals of most kinds of tree fruit now in season showed increase, as compared with preceding week. Apricots were in fairly liberal receipt, representing to a large extent deliveries on contracts. Those kept canners fairly supplied and enabled them to bear the market on present offerings. Bids on Apricots over \$15 per ton were the exception from canners, although sales were made up to \$20 per ton, and in a limited way for very select an advance on this figure was realized. Peaches were in free receipt and market favored buyers, with demand mainly for shipment and immediate consumption. Peaches in bulk were quotable at \$12.50@17.50 per ton for Freestone. Pears sold at a generally low range, but offerings of this fruit were far from averaging choice. Select Bartlettts were salable above quotations. Bartlettts in bulk, fair to choice, were quotable at \$12.50@20.00 per ton. Apples were less active and more favorable to buyers than previous week. Grapes made a fair showing as to quantity, but the quality in the main was not such as the most particular consumers would select. Plums in bulk ranged as low as \$5 per ton for common and it was the exception where anything over \$15 per ton was obtainable. Figs were in reduced receipt and higher. Watermelons are now arriving freely from Fresno. Cantaloupes and Nutmeg Melons are in good supply. Berries of most kinds were in only moderate receipt, but demand for them was limited and prices did not rule especially favorable to sellers.

Apples, fancy, 4-tier box.....	1 00	@ 1 25
Apples, good to choice, per 50-lb box.....	75	@ 1 00
Apples, common to fair, per 50-lb box.....	40	@ 60
Apples, Crab, per box.....	30	@ 50
Apricots, Royal, per crate.....	30	@ 50
Apricots, Royal, per box.....	25	@ 40
Apricots, Royal, per ton.....	10	@ 20 00
Blackberries, per chest.....	2 50	@ 4 00
Cantaloupes, per crate.....	2 50	@ 3 50
Currents, Red, per chest.....	2 50	@ 3 50
Grapes, Seedless Sultanina, per crate.....	1 00	@ 1 25
Grapes, Fontainebleau, per crate.....	50	@ 75
Grapes, Black, per crate.....	1 00	@ 1 25
Raspberries, per chest.....	4 00	@ 6 00
Nectarines, Red, per box.....	40	@ 65
Nectarines, White, per box.....	35	@ 50
Nutmeg Melons, per crate.....	1 00	@ 1 75
Plums, ordinary varieties, per box.....	25	@ 50
Plums, fancy, per box.....	50	@ 65
Prunes, per crate.....	35	@ 50
Peaches, per box.....	25	@ 50
Peaches, wrapped, per box.....	40	@ 65
Pears, Bartlett, per box.....	50	@ 1 00
Pears, common kinds, per box.....	25	@ 65
Figs, Black, per double layers.....	75	@ 1 25
Figs, single layer box.....	35	@ 60
Strawberries, Longworth, per chest.....	2 50	@ 5 00
Strawberries, Large, per chest.....	2 50	@ 4 00
Whortleberries, per lb.....	5	@ 7
Watermelons, per 100.....	8 00	@ 15 00

## DRIED FRUITS.

In the market for cured and evaporated fruits the prominent feature of the week has been the continued active demand for Apricots, not only for the filling of back orders but for stocking up against future needs. Not only were choice in request, with market firm at previous range, but the more common qualities, which were

previously neglected, were favored with very fair custom, prime or fairly good quality being quotable at 5½c. in sacks, and scarcely anything going under this figure. Peaches and Pitted Plums are arriving in quotable quantity, and figures below given are for new product. In Plums not much business has yet been done. In the spot market for Peaches, choice in sacks are not offering under 6c., but speculative dealers are offering same quality for September delivery at half a cent less. New Nectarines put in an appearance on market this week, but hardly in sufficient quantity to be quotable. The samples showed only fair quality, as is generally the case with earliest offerings, and on the stock in question buyers' ideas of values were about 5c. Nectarines will likely go at figures close to those current on Peaches. In last year's dried fruit, the Prune is the only sort receiving any noteworthy attention. Stocks of this fruit have been worked down to small compass, present supplies being composed of very light quantities of medium sizes. This year's crop of Prunes now promises to run heavily to small sizes, the hot and forcing weather of the past few weeks causing early maturing. The foreign demand will be principally for large sizes. Unusually heavy dropping of the fruit this season is reported in the Santa Clara Valley. Prices for new Prunes have not yet been established.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	5 1/4	@ —
Apricots, Royal, choice, in sacks, per lb.....	6 1/2	@ 7
Apricots, Royal, fancy.....	—	@ —
Apricots, Moorpark.....	—	@ —
Apples, in 50-lb boxes, rings, pressed, fancy.....	5 1/4	@ 5 1/2
Apples, 50-lb boxes, rings, pressed, good to choice.....	4	@ 4 1/4
Figs, White, fancy pressed.....	5 1/4	@ 5 1/2
Peaches, unpeeled, fancy.....	6 1/4	@ 7 1/4
Peaches, unpeeled, choice.....	5	@ 5 1/2
Peaches, peeled, in boxes.....	12	@ 15
Pears, unpeeled Bartlettts, halved, fancy.....	9	@ 9 1/2
Pears, halved, unpeeled Bartlettts.....	6 1/4	@ 7 1/4
Pears, quartered, unpeeled Bartlettts.....	6 1/4	@ 7 1/4
Plums, Black, pitted.....	5 1/2	@ 6
Plums, White and Red.....	6 1/4	@ —
Prunes, in sacks 40-50s.....	4 1/4	@ 4 1/2
50-60s.....	3 1/4	@ 4
60-70s.....	—	@ —
70-80s.....	—	@ —
Prunes in boxes, 1/2c higher for 25-lb boxes, 1/2c higher for 50-lb boxes.....	4 1/4	@ 6
Prunes, Silver.....	4 1/4	@ 6

## COMMON SUN-DRIED.

Apples, sliced.....	3	@ 3 1/2
Apples, quartered.....	3 1/4	@ 4 1/4
Figs, Black.....	2	@ 3
Figs, White.....	3	@ 3 1/2
Peaches, unpeeled.....	4	@ 4 1/2

## RAISINS.

Market is lifeless. No new features have been developed within the week. Prices for early deliveries of coming crop will likely soon be named. Stocks of old in the hands of jobbers are now very light.

## CITRUS FRUITS.

Oranges of late varieties are still offering in moderate quantity, but they are hardly quotable, the demand for them being insignificant. Lemon market is firmer for choice to select qualities, offerings of same being on the decrease. Common qualities show no quotable improvement. Limes are higher, with demand fair and supplies light.

Oranges—Navels, fancy per box.....	—	@ —
Navels, good to choice.....	1 75	@ 2 25
Navels, common to fair.....	1 00	@ 1 50
Valencias.....	1 50	@ 2 75
St. Michaels.....	1 50	@ 2 50
Mediterranean Sweet.....	1 25	@ 2 25
California Seedlings.....	75	@ 1 50
Lemons—California, select, per box.....	3 00	@ —
California, good to choice.....	2 00	@ 2 50
California, common to fair.....	1 00	@ 1 50
Limes—Mexican, per box.....	5 50	@ 6 00
California, small box.....	50	@ 1 00

## NUTS.

Spot stocks of Almonds and Walnuts are light and market dull, with values nominally as before noted. No new business in futures reported. Peanuts are in only moderate supply and values are ruling quite steady.

California Almonds, shelled.....	14	@ 17
California Almonds, paper shell, per lb.....	10	@ 12
California Almonds, soft shell.....	8	@ 9
California Almonds, hard shell.....	4	@ 5
Walnuts, White, soft shell.....	9	@ 10
Walnuts, White, California, standard.....	7	@ 8
Chestnuts, California Italian.....	8	@ 10
Peanuts, California, fair to prime.....	5	@ 6
Peanuts, Eastern, hand-picked.....	6	@ 6 1/2
Pine Nuts.....	5	@ 6

## WINE.

In the way of transfers from growers there is little doing, and a quiet market is certain to be experienced during balance of the season, as the bulk of last year's wine is now in second hands. Quotable values continue as before noted, viz., 14@16c per gallon wholesale for new dry wines. For superior qualities transfers within range of 17@20c are possible in a small way to special trade. The wine movement outward is of fair volume, both

by sea and overland by rail. A shipment of 9300 gallons was made the past week per sailing vessel to Society Islands.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, 1/2 sacks.....	180,865	248,214
Wheat, cents.....	102,388	191,016
Barley, cents.....	119,021	131,801
Oats, cents.....	14,005	23,573
Corn, cents.....	282	262
Rye, cents.....	1,445	1,805
Beans, sacks.....	835	2,680
Potatoes, sacks.....	23,435	37,212
Onions, sacks.....	2,207	4,848
Hay, tons.....	3,507	5,444
Wool, bales.....	357	1,134
Hops, bales.....	1	83

## EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, 1/2 sacks.....	167,280	167,280
Wheat, cents.....	102,013	169,141
Barley, cents.....	1,848	1,848
Oats, cents.....	418	418
Corn, cents.....	—	288
Beans, sacks.....	572	959
Hay, bales.....	100	374
Wool, pounds.....	160,090	—
Hops, pounds.....	6,472	5,323
Honey, cases.....	45	12
Potatoes, packages.....	611	2,645

## California Dried Fruit at New York.

NEW YORK, July 18.—Evaporated apples, common, 4½@5c; prime wire tray, 5½@5½c; choice, 5½@6½c; fancy, 7@7½c. California dried fruits.—Market quiet and with out material change. Prunes, 3½@7c. Apricots, Royal, 11@14c; Moorpark, 15@17c. Peaches, unpeeled, 7@9c; peeled, 14@18c.

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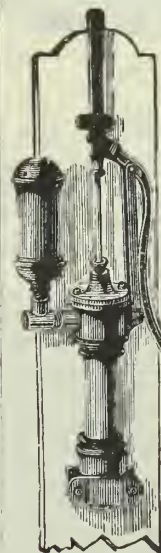
## San Jose Grange.

The rush of business due to handling of the orchard products caused a very light attendance at the meeting of the San Jose Grange held July 14, says the Mercury. The cause of the prunes dropping was discussed, and while various reasons were advanced it was agreed that the crop would not be seriously affected, as there would be plenty of fruit left. E. E. Newell, representing the Cured Fruit Association, explained certain matters relating to the terms of the agreement with the packers' company. By these terms any packer purchasing fruit from a non-signing grower is liable to a fine of \$1000. Addresses were also made by Dr. Lemon of Los Gatos Grange and Mr. and Mrs. Frank Parker of that organization.

## Co-operation.

TO THE EDITOR:—I think the most important subject you could discuss and hold continually before the farmers of this country is "Co-operation." The only way the farmers can meet the trusts of to-day is to form trusts. Legislation will never handle the trusts. Deweyville. A. E. BECKES.

THE twelfth annual session of Washington State Grange was held with Pleasant Hill Grange in Cowlitz county June 5-8. The session was well attended, and all agree it was one of the most enjoyable sessions ever held in the State. The reports show about 30% increase in membership during the year, principally increase in membership of old Granges, as only one Grange was reorganized during the year.



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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 4.

SAN FRANCISCO, SATURDAY, JULY 28, 1900.

THIRTIETH YEAR  
Office, 330 Market St.

### California Vineyards.

We give much space in this issue to the vineyard interests, especially to the discussion of methods of bringing California vines upon a foundation effectually resistant to the phylloxera. The spread of the phylloxera, though it has wrought great destruction in some localities, has on the whole been slow. During the last few years, however, the pest has made accelerating progress; and, in the chief wine regions of the State at least, the interest in securing resistant vineyards is now greater than ever. This interest is favored by the fact that recently the price of wine grapes has been higher than for a decade or more, and the outlook for the immediate future is also for good prices.

The PACIFIC RURAL PRESS has always kept its readers abreast of the progress which has been made in determining which resistant varieties are best for California and in demonstrating the most satisfactory way to use them. The most pressing question now seems to be whether it is better to graft the resistant cuttings with the desired vinifera variety and root them in the nursery, so as to plant out at once in the vineyard a rooted grafted vine, or whether it is better to get the resistant cuttings well established as young vines in the vineyard and graft them in place. The leading advocate of the latter method is the veteran grape grower and viticultural author, Prof. George Husmann of Napa, who has enriched our columns with quite full expositions of his observation and practice. Opposed to his views are the viticultural experts of the University and those who have succeeded with the former method under their



A California Vineyard—A Characteristic Scene in the Coast Region.

advice. All readers who are interested in viticulture will enjoy the letters along these lines which we print in this week's issue, and they need not expect that Prof. Husmann will be floored by the onset which they make upon his views. He is too old and too able a disputant to yield thus easily, and those who are waiting to shape their ends by the weight of the discussion in our columns may be sure that all sides of the controversy will be shown. It is very important that this should be done, and the chief dis-

putants themselves will rejoice over any new facts which readers of the PACIFIC RURAL PRESS may contribute to the discussion.

While this issue occupies so large space in our columns, it is proper that our leading illustrations should point in the same direction. In the last and most admirable report of Gen. Chipman, president of the State Board of Trade, there is a review of the wine production of the State for a series of years, which we republished in the PACIFIC RURAL PRESS of

April 21 ult., and to which the reader who wisely keeps his numbers on file is referred in this connection. We are indebted to the State Board of Trade for the opportunity to reproduce on this page two engravings illustrative of the wine grape interest, being views on the property of the Italian-Swiss Agricultural Colony at Asti, Sonoma county. The vineyard scene is typical of the coast valley region in which it is situated, and it is notable as the largest dry wine vineyard of the State. It is proper that such a vineyard should have the largest wine tank in the world, of which a view is also given. It was recently built in solid rock at Asti. The sides, bottom and cover are lined with a concrete wall 2 feet in thickness, which is glazed, and when full of wine is hermetically sealed, thus keeping the immense volume of wine as safely as if it were in a glass bottle.



The Largest Wine Tank in the World at the Asti Colony in Sonoma County.



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E. J. WICKSON..... Horticultural Editor.

San Francisco, July 28, 1900.

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## The Week.

The activity in fruit lines continues to be the most impressive local topic of the week. The trade is each year passing beyond old limits. The railway company's reports of shipments show that 2320 cars of green fruit have moved East from California up to the end of last week, which is 350 cars more than had been shipped up to the same date last season. About one-half have gone to the Atlantic seaboard, which shows a big development in the markets of the extreme East. Heretofore the great majority of shipments have gone to Chicago, St. Louis and tributary territory. It is interesting to remember that there is a shipper still in the trade who said in 1885 that the amounts which New York would require could be forwarded by express from Chicago. Another indication of force in the trade is seen in the recuperative force of the shippers. Newcastle, the great shipping point of Placer county, was nearly wiped out by fire, losing her outfit of fine packing houses, and yet there was practically no interruption to the trade. The fruit interest is great and will be vastly greater in the future.

Wheat took a sharp look-up just after our last report and has since then looked backward, but has not lost by the operation on the whole. Spot wheat is quotably higher than a week ago, and, though options are still unsettled, they have a promising aspect. Barley is firm for choice and the quality of the new crop is good, though the yield is less than expected. There is a good demand for export—barley being in proportionately better request than wheat. Oats are very firm at last week's range. Corn is unchanged, being so high at the East that local supplies are not interfered with. Hay has weakened a little under the rush of supplies which followed the late advance. Mill feeds are unchanged, except an advance in cracked corn. Meats are still going at last week's quotations and in good condition all through. Butter is ascending; cheese is dragging in absence of large buyers; eggs are firm and higher, both here and at the East. Poultry is about the same as last week. Dry beans are weaker, owing to a disposition to clean up old stocks; but these are not large, nor does the crop outlook promise any excess. Potatoes are low, but are thought to have struck bottom for the season. Onions are dull; too large receipts have caused weakness. Fruits are in large supply and full variety. Plums are having the worst of it, as shippers are passing them by. There must be a large output of dried plums and there is now a prospect of a good call for choice pitted plums. Dried apricots are selling freely, but choice are scarce. Other dried fruits

are appearing, but not doing much yet. Almonds have been largely bought up and the market is strong and higher. Lemons have advanced, supplies are moderate and the demand good. Hawaiian honey is in sight. It is reported of pretty light color, but rather flavorless. The wise ones in the trade declare that the bees are sugar-fed. Wool looks a little livelier, but nothing is done as yet.

## Taxes on Money Secured by Warehouse Receipts.

The Yolo supervisors have decided that money on warehouse receipts is assessable. At a recent meeting the Bank of Woodland was cited to show cause why it should not be assessed for about \$100,000 on promissory notes secured by warehouse receipts for grain. It was contended that such notes are not taxable, for the reason that by virtue of a provision of section 4, article 13, Constitution of the State of California, the notes in question are obligations by which a debt is secured and for the purpose of taxation deemed an interest in property given as security for their payment, and should not be separately taxed.

Deputy District Attorney A. C. Huston submitted a written opinion in the matter, in which he said:

If such notes are within the meaning of this section they are still, in my opinion, assessable, for the reason that it is provided by this section that when a debt, mortgage, deed of trust, contract or other obligation by which a debt is secured shall, for the purposes of taxation, be deemed and treated as an interest in the property affected thereby, the property affected by such mortgage, deed of trust, contract or other obligation, less the value of such security, shall be assessed and taxed to the owner of the property and the value of such security shall be assessed and taxed to the owner thereof.

This seems to mean that when the grower gives his grain as security for a loan the tender must pay the tax as he does on other mortgaged property.

## Irrigation a National Issue.

It is an interesting fact that the development of the arid regions of the West is accepted as a national issue by the leading political parties, and is thus commanding attention in the East, where opposition has been feared but fortunately not always realized. Irrigation is thus received as a proper matter for national legislation. The Republican national platform adopted at Philadelphia contains the following plank:

We recommend adequate national legislation to reclaim the arid lands of the United States, reserving control of the distribution of water for irrigation to the respective States and Territories.

The Democratic national platform adopted at Kansas City contains the following plank:

We favor an intelligent system of improving the arid lands of the West, storing the waters for purposes of irrigation, and the holding of such lands for actual settlers.

Such recognition of the problem by both the great national parties is a long step forward. Now the work by individuals and associations, to determine the best route to the end desired, can proceed with fuller confidence and greater expectations.

LUTHER BURBANK of Santa Rosa is gathering his usual summer crop of horticultural marvels and has allowed us to see some of them. One, which he will call "Maynard," in honor of Prof. S. T. Maynard of Massachusetts, is, we think, the handsomest table plum we ever saw. It is shapely, of rich, solid, dark color, fine texture, large size and exquisite flavor. It will honor its name. Another novelty is a "stoneless prune," medium size, with the peculiar endowment of a plump kernel with only a vestige of a covering for it. There are others also which will be heard from in due time. This year is bringing out in stronger light some of the lately introduced varieties of Mr. Burbank's creation. Sultan is proving a most wonderful shipping plum, and is standing up perfectly while others fail. Sugar prune keeps bearing full on the original trees, and is ready for the drier this week at Sebastopol, in the coast region, where the French prune is little more than half grown. One specimen, which came to us in a box with other plums that had failed, was sound and apparently drying, even in a soaked wrapper. This disposition to dry even before leaving the tree shows its naturally

heavy juice, and in connection with its extra earliness would seem to largely outbalance any objection which might be urged against its size and slower curing incident thereto.

We do not agree with the forebodings of some people that the Belgian hare is likely to prove a pest in this country, as the English rabbit did in Australia, and in some other parts of the southern hemisphere. Our chief reason for holding this view is not because of our possession of any prophetic vision, but because our hindsight is reasonably good. We are aware that for a quarter of a century (and how much longer we do not know) the English rabbit, without any of the delicateness due to high breeding, has been free in California. We have seen urchins beyond number grow weary of their pet burrowing rabbits and turn them loose. We have seen these animals quickly disappear through the combined efforts of coyotes, wild cats, birds of prey and pot hunters, and other enemies, probably, of which we wot not. Now, if for more than a quarter of a century the English burrowing rabbit has been free here and has never gained a foothold, what is the use of getting excited over a recent introduction? As we understand it, this animal has only proved a pest where it was introduced in the absence of enemies. California is full of enemies of slow-going rabbits, and only the fleet natives can hold their own. We are not afraid of the Belgian.

THE Division of Entomology of the U. S. Department of Agriculture has just published a monograph on "The Red Spiders of the United States" by Nathan Banks. We opened the pamphlet with haste, hoping that at last the vexed question of the "red spider" and "yellow mite," as they occur in California orchards, would be settled; but, to our disappointment, California has no standing whatever in the red spider line, for no occurrence in California is noted except that of a six-spotted orange mite in San Diego. Mr. Banks should come out here and see our stock before he uses so broad a title to his essay. We probably have more red spiders in California than in all the country beside, and we do not like to have them slighted. We have learned how to kill them, but we want their scientific standing established so we shall know how to write their epitaphs.

THERE will be no peaches or prunes exported from southern California this year, according to the statements of deciduous fruit growers. President A. R. Sprague of the Southern California Deciduous Fruit Exchange, in an interview, says: "There will be very little dried fruit in this section this year except that which comes from the north. There will be no shipments of peaches or prunes. The apricot crop also is very short; only here and there is there a locality in which the crop approaches the average."

THE California State Floral Society has decided to give a floral show on the 25th, 26th and 27th of October at Sherman, Clay & Co.'s Hall. Mrs. H. P. Tri-cou, Mrs. J. R. Martin, Mrs. Morris Newton and George Phelps were appointed a committee of arrangements. The society also resolved to contribute to the Native Sons' parade on the 9th of September with a floral float. A new badge, consisting of a California poppy enameled on a dead gold background, was adopted.

REPORTS from various points in Texas show that 2,000,000 pounds of wool are being held in the State because growers refuse to accept current prices and that there is perhaps as much more held at uncounted points and on the ranges. The growers have held a conference and agreed to hold the entire clip indefinitely.

It has been figured out in New Jersey that land tends to rise 30% in value wherever good roads are introduced, irrespective of other natural benefits. They are invariably the forerunners of other improvements, such as electric railways, free mail delivery, increased demand for country residences, and so on.

IN the harvest of 1899 there were 1,265,601,664 gallons of wine produced in France; 766,107,500 gallons produced in Italy; 594,393,750 gallons produced in Spain, and 158,505,000 gallons produced in Roumania. The total production of the world is estimated at 3,338,101,704 gallons.



## QUERIES AND REPLIES.

### What to Plant.

TO THE EDITOR:—I have two acres of unplanted land in Maywood colony and I am undecided in what to plant them. I have part of the ten that I own in olives and part in Imperial Epineuse prunes, but I have been thinking of planting the remaining acres in peaches or apricots. In planting the place I have in mind the certainty of the crop, the length of the life of the trees, their freedom from disease and the profitableness of the crop. In reading your paper I find that the quotations on apricots run higher in price than anything else, while those on prunes run about the lowest. Now, will you advise as far as you can as to what would be best for me—a non-resident—to plant on those acres? If you should say peaches, will you tell me about how long the peach tree lives in California? Let me further say that water is within 18 or 20 feet of the surface on this particular lot. Olives and prunes thrive there without the need of irrigation.—NON-RESIDENT COLONIST, Indiana.

We would rather take our chances on good yellow free or cling peaches than on any other fruit—providing the soil is suitable. The peach tree in California, on good, deep soil and adequately supplied with moisture when it reaches heavy bearing, is a long-lived and profitable tree. There is no such limit to the productive longevity of the peach in California as there is at the East. The shortest duration we ever heard set for the peach in a good place is twelve crops, and we know of many orchards which are far beyond that. But the trees must be properly taken care of and must not be allowed to get too dry.

As for comparative prices of dried fruit, the fact must, of course, be borne in mind that some cost the grower more than others, and higher price does not always mean greater profit. For instance, it takes, roughly speaking, about twice as much fresh apricots to make a pound of dried as it does with prunes, and there are a good many other things to consider. The planter is wise to have some regard for high values, of course, but his chief inquiry should be, What will my soil and climate produce in good quantity and high quality? We hold that the peach is the great fruit for the Sacramento valley, so far as temperature, soil and moisture conditions warrant fruit planting. It is safer than the apricot from frost injury, which is often very important.

### Bees in Bean Fields.

TO THE EDITOR:—I should be very thankful for information as to whether bees are considered a detriment or an advantage in Lima bean fields when in bloom. Having some 400 acres of Lima beans, I feel largely interested as to the effect bees would have on the crop. I have also many hives of bees which would thrive on the blossom, but fear that it may be a detriment to the bean yield.—READER, Ventura County.

We can only cite you the experience of people in your own region, for it is probably only in your county that there large bean and bee interests are associated. In September, 1897, W. T. Richardson of Fremontville read a paper at the Santa Paula Farmers' Institute on "Moving Bees to Bean Fields in Ventura County," which was published in the PACIFIC RURAL PRESS of September 11, 1897. He gave quite minute suggestions as to moving bees and concluded that after two years' experience he was satisfied that in a season when the bees do well in the mountains it would not justify moving to the bean fields, but with a poor season in the mountains, when the bees do not build up and have not plenty of honey to insure good condition the following spring, he would advise moving the bees. He said that he had often been asked if the bees injured the growing beans. Mr. Alvord, who has given the subject careful consideration, said that the bees are a benefit to the crop. Mr. Jacob Maulhardt said that he was satisfied that his crop was better for having the bees at his place in 1896. Mr. Richardson said that he had never heard of a practical grower who dissented from this view. We have heard nothing later than these statements of Mr. Richardson and recite them as the best testimony in our possession on the subject. We shall be glad of later experience.

### No Apricot on Almond.

TO THE EDITOR:—A gentleman here is desirous of having his almond orchard top-budded to apricots. Will the apricot make a satisfactory union with the almond stock?—GROWER, Corona.

Apricot on almond has for years proved a most un-

satisfactory combination and is condemned by all whose experience has come to our knowledge. The growth is usually very satisfactory at first and good size is quickly attained, but then the trouble commences whenever wind or weight of fruit makes a stress upon the union. We have seen trees 3 inches in diameter part at the joint cleanly and show that, though progressive union is made in the new wood, the old wood does not knit well, and the fracture is clean, without split or splinter. In early days orchards of such trees were planted, but they disappeared years ago. Years ago Dr. J. J. Shaner of Los Gatos said he could make the apricot go in the almond by grafting low down. We would like to have his later conclusions and the experience of others also. The almond is an admirable root for soils which suit it, and if there is a way to use it for the apricot we ought to know it.

### Seedling of Petite Prune.

TO THE EDITOR:—I send specimens of a seedling prune upon which I would like your judgment. Its parent is a Petite prune on Myrobalan root. The tree is four years old and well grown, much resembling the Petite, but with smaller leaves and twigs. It seems to ripen a few days (perhaps a week) before the Petite, and the fruit is slightly larger than on any of the surrounding trees of that variety. Is it worth propagating?—Geo. E. DUNN, Napa.

The seedling is well described by our correspondent. It has not great but still quite distinct differences from the Petite. The question would be, Are the differences great enough to make it a substitute for Petite? To determine this, more observation and trial are necessary, and the comparative results in drying must be noted also. It seems to us a little inferior to Petite in flavor, and it may not make so good a dried prune. The earliness is worth while. The fruit should be put on probation before large propagation is undertaken.

### Tobacco from Santa Cruz Mountains.

TO THE EDITOR:—I send a sample of tobacco (Connecticut Leaf and Havana) raised and cured by myself here in the Santa Cruz mountains, 2½ miles south of Alma. If you will kindly express your opinion in your paper you will greatly oblige me and many others who are awaiting the result of my experiments.—J. G. GRUNDEY, Alma.

The tobacco seems to us very good in color and flavor, and in the editorial pipe it burns well and yields a very mild smoke. So far as we can judge, it is a good article. But the test of tobacco is its acceptability to buyers and manufacturers. It should be submitted to the nearest cigar maker at first and he should be induced to work up a little of it. If it is then promising, the large factories in the city should be approached. The final test will be along commercial lines.

### Dying Leaves.

TO THE EDITOR:—A few of our French prune trees are losing their leaves since the last two weeks, and there is also some of their fruit dropping. The leaves are badly spotted. Is the cause of this a fungus, or is it the dryness of the soil? I had the trees irrigated. Should any spray be applied this late, and, if so, what ought to be used?—P. R. SCHMIDT, Calistoga.

We find no disease and no occasion to spray. The leaves are apparently dying prematurely. Probably the irrigation was inadequate. There are many orchards very dry underneath this year, and they are behaving just as yours is. We hope everything will get wet clear through this winter.

### Drying Blackberries.

TO THE EDITOR:—I find a great many blackberries are drying on the vines. Can you tell me the cause of this? I watered freely until the berries were well formed, but have not watered since.—READER, Woodside.

If there is no appearance of rust on the foliage, the trouble is probably lack of water. It is wonderful how quickly the plants will show the effects of this. In a light soil irrigation must be kept up at short intervals until the fruit is picked to get good size and quality. In retentive soils the irrigation can naturally stop earlier.

The tendency of fruit trees in the thermal regions of California to bear continuously and not in well-defined crops is seen in the case of nearly all fruits, but it is seldom that the disposition is of much com-

mercial account. The San Diego Union states that a second crop of oranges is ripening in that county. A few boxes are now being shipped away and the number going will increase from now on. This is thought to be the only county where the Navel orange tree bears two crops. In the chief orange regions of the interior the drop of temperature in the winter seems to give the trees a better defined blooming and ripening season.

## WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending July 23, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

### COAST AND BAY SECTIONS.

The temperature has been slightly above normal, and light sprinkles of rain have fallen in some localities. Conditions have continued favorable for crops. Harvesting, threshing and fruit picking have progressed rapidly. Wheat and barley are yielding much less than estimated in most places. The late sown wheat is considerably shrunken; the early sown is plump, but the heads are not well filled, probably owing to frosts in April. Much damage is being done by potato blight in Humboldt county. Corn and beans are making good growth. Early apples are ripening and give promise of a good crop, though in some places the fruit is damaged by codlin moth. Apricots are small, but the yield is said to be better than expected. Other deciduous fruits are doing well. Vineyards continue in good condition.

### SACRAMENTO VALLEY.

The weather has been favorable for grain harvesting, fruit picking and drying. In many places the grain is all in and stacked, while in others harvesting and threshing still continue. The yield in some sections is very much less than was expected, reports stating that the crop will be only about one-half the average. Other sections report a fair crop. Both wheat and barley are excellent in quality. This remarkable shortage in the grain crops has not been satisfactorily explained, though some reports attribute it to the hot wave which prevailed at the time wheat was "in the milk." Good crops of deciduous fruits are being gathered; the fruit is generally excellent in quality. Vineyards continue thrifty. Oranges and olives are doing well.

### SAN JOAQUIN VALLEY.

The weather has continued clear and warm and favorable for growing crops. Harvesting and threshing have progressed rapidly. The yield of wheat in some portions of the valley has been very disappointing, owing, it is thought, to several warm days while the grain was "in the milk." It was badly scorched, and, though it seemed to be maturing as usual, it turned out to be pinched. In other sections an insect worked on the roots of the plant, reducing the sap in the stalks and seriously affecting the grain. The beet crop has also been materially damaged by blight; as yet it is impossible to estimate the crop. The second crop of alfalfa has been cut in some localities, and is of good quality and fair yield. Bartlett pears, plums, early Crawford peaches and some watermelons are being shipped. Grapes are in good condition.

### SOUTHERN CALIFORNIA.

Warm days and cool nights, with occasional fogs, have prevailed during the week, and light sprinkles of rain have fallen in some sections. The deciduous fruit crop is very light, and not of the best quality. Lemons are yielding a heavy crop. Walnuts are doing well, especially on land where water is plentiful. Oranges are in good condition and a large crop is probable. Tomatoes are yielding a heavy crop. Grain is turning out a very light crop, though the yield of oats in some places is better than expected.

LOS ANGELES SUMMARY.—The week was favorable for growing crops in the northern section, but a few days of hot weather would injure corn and beans. Showers in the mountain sections Saturday injured some hay and feed. The week closed hot in southern sections.

EUREKA SUMMARY.—Little improvement in the condition of potatoes and oats; spraying has arrested the spread of blight. The hills are becoming brown, but pasturage in the valleys is good. Fruit prospects continue excellent. The hay crop is below average.

### Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, July 25, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.	Total Seasonal Rainfall to Date.	Total Seasonal Rainfall Last Year to Same Date.	Average Seasonal Rainfall to Date.	Minimum Temperature for the Week.	Maximum Temperature for the Week.
Eureka.....	.00	.00	.00	.08	48	66
Red Bluff.....	.00	.00	.00	.03	62	110
Sacramento.....	T	T	.00	T	54	98
San Francisco.....	T	T	.00	.03	51	88
Fresno.....	T	T	.00	T	60	106
Independence.....	.06	.06	.01	T	60	96
San Luis Obispo.....	T	T	.00	T	48	86
Los Angeles.....	.00	.00	.00	.03	50	94
San Diego.....	.00	.00	.00	T	64	84
Yuma.....	.02	.02	T	.14	74	108



## THE VINEYARD.

### Grafting Resistant Vines.

TO THE EDITOR:—A little leaflet of four pages, entitled "Resistant Vines and Vineyards in California," published June 18, 1900, by Prof. George Husmann of Napa, should be read by every vineyardist whose vineyard is or may be manaeed by phylloxera; that is to say, practically every vineyardist in California. Yet, while giving much useful and timely information, it contains also some statements and advice that are at least open to reasonable doubt.

Prof. Husmann, while acknowledging some of the good qualities of certain varieties of *Rupestris*, especially of *Rupestris* St. George, and their peculiar adaptability to the drier and hotter localities of California, still maintains the superiority of grafting in the vineyard, after the stock has attained considerable size, over bench grafting of cuttings and preliminary uniting and rooting in a nursery. While this superiority may be real with regard to Lenoir and other similar stocks, it is doubtful with regard to *Riparia* varieties, and almost certainly not true with respect to all *Rupestris* varieties.

The union of a scion to a stock may be considered as the healing of a wound, and is the more complete the younger the uniting parts and the greater the affinity between them. Affinity used in this sense means similarity of chemical composition and tissue structure. The evidences of such affinity are: the ease with which the scion unites with the stock and the permanence of the union. Now, where the affinity is perfect, as one variety of *Vinifera* is grafted on another, or nearly perfect, as when a *Vinifera* is grafted on Lenoir, the age of the stock may be left out of consideration, as the union is sufficiently complete even when the stock is old. When, however, the affinity is not quite so complete, as when a *Vinifera* variety is grafted on *Riparia* or *Rupestris*, the added disadvantage of an old stock may imperil the longevity of the union. The affinity of *Rupestris* St. George to *Vinifera* is not, as incorrectly stated by Prof. Husmann, less than that of *Riparia*, but at least equal to it, at all events, when young. There are two reasons, however, which make it more dangerous to graft old *Rupestris* than old *Riparia*. These are that the number of successful unions on old *Rupestris* is smaller, owing, it is said, to a yearly increase in the hardness of the *Rupestris* and the great tendency of all varieties of *Rupestris* to throw out suckers. The latter is probably the chief reason, as the flow of sap from the roots naturally takes the line of least resistance, viz: into the suckers, thus allowing the graft to suffer and finally perish for lack of sap. It has been shown that this tendency to sucker is much diminished where the union is so nearly perfect as it is in cutting-grafting.

As to the expense of cutting-grafting and rooting in nursery, this seems to be somewhat exaggerated by Prof. Husmann. As high as 90% of successful grafts have been obtained in California by careful but inexperienced workmen. Even where only 60% is obtained, it should be noted that this means 60% of perfect unions, so that no imperfect grafts go into the vineyard. This is undoubtedly better in the long run than obtaining even 90% in the vineyard, for, not to speak of the 10% of absolute failures, there is bound to be a certain number of imperfect unions among the 90% which it is impracticable to eliminate, for, as Prof. Hilgard has found to his sorrow in his own vineyard, a second grafting on a *Rupestris* stock is almost always a failure, on account of the unconquerable tendency of the old stock to send out suckers. Moreover, contrary to Prof. Husmann's statement, it is much easier to attain the important object of having the union above ground when using cutting-grafts started in nursery than when grafting in the vineyard. The impossibility of attaining this object in the case of regrafting in the vineyard is of course plain. Moreover, the cutting of raftia, of scion roots and stock suckers, of which Prof. Husmann complains, is, or should be, done equally in the vineyard; and there, owing to the large extent of land to be gone over, it is of course much more onerous and expensive. Other advantages will readily occur to the practical man, such as the possibility of irrigation and thorough cultivation at a comparatively small expense in the nursery, not to speak of the fact that the land intended for vineyard can be used for other crops for one year longer without perceptible loss of time.

Several questions, however, still remain unanswered. For instance: Will *Vinifera* vines grafted in this way on *Rupestris* St. George live and bear well in California for a sufficient number of years to be profitable, say, twelve years? To answer this question with absolute certainty requires exactly twelve years. We can say, however, now, that they have done so in those parts of southern France where the conditions most resemble those of California; and also that, as far as tested, the rooting and grafting of the *Rupestris* St. George in California leave nothing to be desired. Another cognate question asked is: Why seek after strange gods when we have the old and tried Lenoir? For a preliminary answer to this it is

well to consult again the twenty-five years experience of France. In central France and in the richer and moister soils of southern France, vineyards on Lenoir stock have borne well for a quarter of a century; but in the drier and poorer soils of the south many failures have been chronicled. At the present day the Lenoir is abandoned as a phylloxera-resistant stock in all parts of France, as other stocks have proved equally good in soils most suited to Lenoir and superior in all others. In California, although no absolute failures (that is death of the vines) on Lenoir stock have been noted, it has been the experience of many that the crop is much less than it was when the *Vinifera* were on their own roots in the same vineyards before the advent of the phylloxera. Though this may be due to some extent to soil exhaustion, it is probable that some of the effect may be traced to the action of the insect on the Lenoir, which in dry soils replaces the injured roots with difficulty. Anyone who has seen Lenoir and *Rupestris* St. George growing side by side upon a dry hill soil could not fail to give the palm to the latter.

With regard to the Hybrid France caution is advisable; first, because all phylloxera-resistant direct producers have so far proved unsatisfactory; and secondly, because the experience of some who have tested it in California is that it is a small bearer, which is an inadmissible quality in a vine for general planting in the present state of the market.

With regard to the time necessary to bring a vineyard on resistant stock into full bearing by the two methods under discussion the experience of a practical vine grower in the south of France is worth noting. His results published in the "Revue de Viticulture" two or three years ago are substantially as follows:

Two pieces of ground were chosen as alike in every respect as possible. On each piece three kinds of resistant stocks were planted and grafted the same kinds of *Vinifera* scions. On one piece the cutting-grafting method was employed; on the other the vineyard-grafting method. It was not until the eighth year that the latter was considered in full bearing and the total weight of the various crops obtained on the vineyard-graft portion up to that time was just about half of the total obtained from the cutting-graft portion. The vine grower considered that this difference was due mainly to the delay in obtaining a full stand of vines and to the numerous imperfect unions in the case of the piece grafted "in place." The vine grower makes no reference to phylloxera, which was presumably absent. If present, there is little doubt that the later crops showed the same or greater differences. **FREDERIC T. BIOLETTI,**  
Agricultural Experiment Station, Berkeley July 11, 1900.

### Bench Grafting vs. Field Grafting.

TO THE EDITOR:—In some recent articles my friend Prof. Husmann takes decided stand against the method of bench grafting the vine practiced in France and recommended for trial by Mr. Bioletti of the State University. I fear the good professor, while doubtless well acquainted with most methods of grafting, speaks of the drawbacks of "cutting-grafting" from an extremely theoretical and not a practical standpoint. We are using both methods, side by side, and I feel sure that so doing is the only really practical way of comparing results. To remain wedded to one method, however time-honored, and to condemn another without careful investigation and actual comparison of results, is hardly just nor conclusive. I would prefer not to write an article on this subject for a year or two more, till I could give actual results of yield per acre, etc., but am tempted to answer Prof. Husmann's strictures on the methods recommended by the University sooner than I otherwise would, as I fear his comments may deter many small growers from making further investigation and trial of this most valuable and practical method. I have taken a bicycle trip each summer for the last three years through the Napa and other grape-growing districts, to see what other people are doing and have done, and I am more than ever convinced that bench grafting will eventually prove to be in most hands the most successful, cheapest and quickest method of reconstituting a vineyard. It may not, however, be the common method for a couple of years to come, as, possibly, there are not at the present time enough large cuttings of *Rupestris* St. George grown in the State to completely supply the demand. Some people will have to use smaller cuttings, plant them in the vineyard and lose time by waiting till they grow large enough to graft in place.

Prof. Husmann says that Geo. Schoenwald, who successfully used this method two years ago, did not use it last season. Now, as Mr. Schoenwald writes that he sold his *Rupestris* St. George cuttings for the neat figure of \$32 per 1000, of course he didn't cutting-graft. Neither would you or I. But the satisfactory results of his cutting-grafting of two years ago, as shown in his splendid little vineyard that would have borne a crop this year had he not removed the bunches, demonstrate the success of the method and answer the arguments of those who fear

it will take too long to bring a vineyard into bearing if this method be used.

**VALUE OF A GOOD STAND.**—There are two great advantages of cutting-grafting, apart from the actual expense of either method. The expense of merely grafting is a minor one compared with that which ensues from a "poor stand" of grafts in the field. The main point, from business considerations, is: How many grapes is the vineyard going to yield during the first ten (or twenty) years of its existence.

One objection to field grafting is the heavy penalty the vineyardist pays when the percentage of "misses" is high. I hear much talk of 95% of grafts growing, but I have heard more of it than I have seen. When a man makes a success of a thing, he is apt to tell all his neighbors, pat himself on the back and, if he is a pen-wielder, rush into print. But when he loses 30%, 40% or 50% of his grafts, he keeps very quiet about it. He may blame his hired grafter or the weather or clods, or something else, but, you may depend on it, he does not proclaim it from the housetops. From personal observation of the more successful vineyards on resistant stock in Napa valley and elsewhere, I think that year in and year out the average of grafts that grow is not over 75%. It must be remembered that these do not all make "good unions." Defective unions mean either a stunted and unprofitable vine or a breakdown under a heavy load of foliage or grapes when the wind blows, perhaps after two or three crops have been borne.

**LOOK AT THE VINEYARDS.**—Take a trip through the best resistant vineyards in Napa and Sonoma that are not over ten years old, and you will notice a woeful irregularity. Many of these vineyards were planted with cuttings in the field. Some grew; some did not. The next year the misses were replanted. Again some grew; some did not. The third year sees a stock growing at every stake. Then comes the grafting (second or third year). Say a fair average of grafts that grow, taking one season with another and laying optimism aside, is 75%—25% miss. Say 10% of the grafts have poor unions that will remain vines, but unprofitable ones. The sum total of non-productive vines is perhaps over 30%. In a 100-acre plantation that has cost not only money, but time, and the use of the land, 30% (or thirty acres) may still be unproductive and yet a constant bill of expense. Such vineyards are worse than dairies in which one-third of the cows are worthless, and worse than a factory would be in which, with all the machinery running, only two-thirds of the looms were actually weaving cloth. Such concerns do not pay.

The patient vineyardist regrafts the misses next year. That is a question of digging down 2, 3 or 4 inches to get a new split for the scion. Then the non-resistant scion calmly roots, and at the end of a few years is very apt to become worthless. Another horn of the dilemma is to wait for a sucker to grow big enough to graft. If the precious but fated stump is watched through the season, and all the sap coaxed into one sucker, it may be big enough at the end of a year to hold a scion. If not, the whole thing can be dug out after three or four years of "dieker-ing" and a new cutting planted.

Of course, this sounds bad in print, and the people who think they can always make 90% of their field grafts grow may not look at it in the same light, but it is what I have actually seen, in vineyard after vineyard—not on *Rupestris* St. George, it is true, but on other stocks. And I see no reason to look for very different results on this stock. It must be remembered that this stock has been scarce and high-priced, and each vineyardist planting it has naturally put out the plants in his most favored locations, and tended the vines with much more than ordinary care. And a 10% or 25% loss in output for ten years, with expense remaining the same, is a very serious handicap for any kind of enterprise—even a vineyard. And you are very apt to face this proposition if you follow Prof. Husmann's advice and disregard the recommendations of the University and the experience of thousands of French vineyardists, who, after successfully replanting over 2,000,000 acres of resistants, trying both methods side by side, have almost entirely abandoned field grafting. There must be some reason for so doing. Surely we do not want to condemn a method that has proven successful somewhere else, and condemn it untried!

**THE OTHER WAY.**—In bench grafting all the losses are concentrated into the first year, instead of being strung along a series of years. If you get 60% of good unions you can plant them in the field with the assurance that, accidents excepted, every one will grow and make a good vine. If you plant 100 acres you get 100 acres, and not, as with cuttings, perhaps 70 or 80 or 90. Prof. Husmann suggests that the grafted vines will have to be handled with great care when planted in the field, that they may not break at the union. This shows a total misconception of what constitutes a good union. I only use those vines that are perfectly knit, so that the vine may be given a strong twist without any movement at the junction. It is as strong there as anywhere else.

The "shock" of transplanting is spoken of. Well, I look upon that "shock" as being rather mythical than actual. The strong rootlets on the cutting graft begin to grow as soon as put into good, moist



soil, and keep on growing through the season. There is no perceptible shock unless through carelessness the roots become dried before planting. Our plantings of this spring, that were but cuttings a year ago, have already made a growth of 18 inches to 2 feet, and some of them have grapes on. They haven't been half as badly shocked as the two-year-old vines off which we sawed the tops, stuck a little scion into the bleeding wound, and covered up under a suggestive little mound.

One more point: The cutting-graft is planted with the junction root well above ground. There is no chance for non-resistant roots to strike. A large number of "resistant" vineyards are suffering from the results of this cause. It is a hard thing to get the average field hand to hunt for these roots and cut them off. They look all right to him, and if you tell him that "some day the bugs will get on them and kill the vine" he sets your remark down as a wild "pipe dream," and as soon as your back is turned quits hunting for them.

Some years ago a number of vineyards in Livermore were planted on resistant stock. It is only lately, however, that these vineyards have been invaded by the phylloxera. Last year, on looking at a remarkably fine and vigorous vineyard fifteen or sixteen years old, on "Riparia," it took but a few scrapes with a grape stake to demonstrate that the great side roots were unmistakably Cabernet, pure and simple. This vineyard, with most of its roots Cabernet, must succumb when invaded by phylloxera.

All such difficulty is avoided when bench-grafted vines are used. It can also be avoided (usually) in field grafting, but not always, as it is often impossible to get stem enough above ground to hold the scion.

In France bench grafting has almost entirely supplanted field grafting. And I think that here in California in a few years, as soon as sufficient cuttings are available, as they soon will be, that the method will come into general use. In the meantime, I would suggest a combination of the two ways, as the next best resort. Plant cuttings, or, preferably, as insuring a more regular stand, and earlier bearing, rooted vines of *Rupestris* St. George in the field, and graft as soon as possible. In the meantime start a nursery of cutting grafts, so that you will have on hand enough good strong vines to fill up all vacancies in the vineyard as early as possible. In this way a fairly regular and productive vineyard will soon be obtained. The supply of cuttings of *Rupestris* St. George will be larger than last year and prices will be reasonable, without doubt. As has been the case in France, in a few years nurserymen and the more expert vineyardists, who may have a surplus above their own needs, or who have gone through the doleful siege of reconstitution, and are once more on their "viticultural feet," will start nurseries to supply planters who do not care to do their own grafting.

Having tried both methods, I want to emphasize the fact that a vineyardist who does not make careful trial of this method is working, to a certain extent, blindly and is not making full use of his opportunities. It would be a misfortune if Prof. Husmann's comments on this method, which he can not have fully investigated, should cause growers to think the method unworthy of trial. I strongly urge every vineyardist who looks forward to planting on any considerable scale to read with care the bulletins of the State University and to try bench grafting a few thousand vines. It is always worth while to take a little pains to get the best possible results in any line of business, even in grape growing.

I think the thanks of the vineyardists of the State are due Prof. Hayne for calling attention to the merits of *Rupestris* St. George as a stock for California, and importing the stock for distribution, and also due Mr. Bioletti for his careful work in experimenting on and lecturing and teaching modern methods of reconstitution. There is a tendency in some quarters to carp at and criticize the work done by the agricultural department of the University. As a matter of fact, we are all profiting by the valuable work done by this department of the University, and it is fair to give credit where credit is due.

Martinez. FRANK T. SWETT.

#### Work of the Wine Makers' Corporation.

At a meeting of the directors of the California Wine Makers' Corporation on the 13th inst., Osgood Putnam was elected vice-president and J. J. Hassell secretary, owing to the resignations of C. F. Montalegre and W. J. Hotchkiss, respectively. The latter still retains his position as manager. The accounts of the corporation are being closed up, preparatory to the final distribution to the members. For the first year the distribution was on the basis of 12½ cents a gallon for both red and white wines, for the second year 15 cents for both varieties, for the third and fourth years 10½ cents for red and 14½ cents for white wines. The average price received by members for the five seasons has been 12 cents a gallon for red and 14½ cents a gallon for white wines. In all, about 23,000,000 gallons were handled, of which about 1,000,000 gallons were white wines. The figures accessible for the last three years are as follows: 1896 and 1897, red wine 8,236,338 gallons, white 502,436 gallons; 1898, red 1,365,929, and white 60,285 gallons.

## THE DAIRY.

### California Dairy Facts and Opinions.

In the transactions of the State Agricultural Society, just issued, we find, in addition to the excellent report by Secretary Shields, which we have already reproduced in these columns, several interesting statements by those who competed for the awards for dairy products. These represent the higher dairy practice, and should be suggestive to those who are asking for better ways. We shall introduce three from different regions of the State.

**METHODS OF CHARLES DECARLI, Waddington, Humboldt County:** The yield of my cows last year was 339 pounds per cow. The yield in previous years has been greater, in 1890 being 411 pounds per cow. The falling off is due to losses every year of the best cows by milk fever. This is a disease which has been very severe in this county, invariably killing off the best cows. An unusually heavy loss a year ago made it necessary to restock with heifers, thus causing a poorer showing.

During the past year I milked fifty-five cows. Each cow averaged during the year 7159 pounds of milk and 339 pounds of butter. My cattle are principally graded Durham and Jersey. During the past ten years I have used only thoroughbred bulls. First I had a Shorthorn; but for the last six years I have used Jerseys. If dairymen in general would pay more attention to the selection of bulls, great improvement in herds could be effected. A thoroughbred bull of some good breed should be kept, and I believe that the best results would be reached by breeding from bulls of one breed only.

We never feed grain to our cows, but, instead, in addition to good pasture, we feed green feed and also hay in the barn. In July we begin by feeding green peas, and through August, September and October we feed green corn and then in November and December we feed beets and carrots. We also cut grass and feed it in the barn green. Although it requires more work it pays, because of the greater amount of feed which can be obtained from a given amount of land—not being trampled upon by cows, the grass grows faster and reseeding is not so frequently required.

For the past few years I have tested every cow in the herd annually at least, at the same time weighing her milk and then computing the amount of butter fat produced by each cow. Those showing the lowest yield of fat have been those first weeded out. A more frequent test is unnecessary, except in the cases of those on the line or below it, since such results, where the cows have come in at about the same time, are approximately correct. As a minimum, a cow must give at least twenty pounds of milk or five-sixths of a pound of butter daily. A higher average should, however, be sought.

I have fifty-five cows on sixty acres of range; no hills. They are not kept in the barn nights in summer, but are in the barn on winter nights when the weather is stormy. They are not fed grain in summer, but are fed green corn, beets, peas and grass in the barn. Swiss milkers are employed and they milk twenty cows each. For the most part I raise my cows, but also buy some. The leading consideration which influences me in buying is the appearance of the cow. Afterwards the value of a cow is judged from the amount of butter fat produced. This is arrived at by the test and amount of milk.

**STATEMENT OF MRS. M. E. SHERMAN, Fresno:** The management of a fine herd of cows affords a fascinating pursuit of constantly increasing interest. The carefully kept records show many unexpected failures, and the first success often comes as a surprise; but when experience has lent her guiding hand, we learn to build slowly toward success, each time with a reasonable assurance of a favorable result. The old adage, "the sire is half the herd," is true when he is a full-blood and the cows of mixed or no breeding whatever. The sire is the result of long selection; his dam and grandam are to be considered as to the quantity and quality of the milk they gave, for if they were not good dairy cows a long pedigree is of little use in making him a sire of high-producing cows. The first Holstein bull we owned was Beauty Prince (9355 H. F. H. B.). He proved to be a marked producer of good dairy animals; we often wish he were alive to breed to some of the fine cows we now own. Three hundred and nineteen grades sired by him gave the following results: The best three made respectively 462.75 pounds, 437.25 pounds and 432.25 pounds of butter in a year; thirty-nine between 400 and 425 pounds; forty-two between 375 and 400 pounds; twenty-nine between 350 and 375 pounds; nineteen between 325 and 350 pounds; seventy-one between 300 and 325 pounds. These were culls; only one, however, fell under 200 pounds. When the dams of these cows were tested only nine reached 275 pounds of butter. These older cows were failures from two causes mainly: poor quality of milk and lack of training, in that they went dry in five or six months.

The milking herd at present—January, 1900—consists of eighty-six head of registered Holsteins, a few

grade Jerseys, four pure-bred Durhams and the rest are simply "cows," or, if you prefer the term, "natives." One hundred and fifty cows at present make up the herd, with thirty-one heifers to come in next month. The entire herd—and this includes cows turned into beef, as well as heifers—made 339 pounds of butter per cow, with a milk average of 4½% of butter fat. The registered herd produced 386 pounds of butter per cow, with a yearly average of 4.4% of butter fat. We personally do the testing, as upon it turns the knowledge of the success or failure of the herd. Employees might combine to cover each other's neglect of duties, for all this work, if not accurate, is useless. We take for three days preceding the tests of the individual cows the actual butter made in the creamery, test the skim milk and buttermilk; the three days following the test of the cows the entire milk is tested. The individual tests are added together and must come within a pound of butter of the other totals, or we test over again. Only once have we had to do so in three years. In following this way we at first assumed that the butter should overrun the fat by 20%, but soon found our results only showed 11% to 13% of overrun. To be certain we were right we had all rolls tested at different times by Mr. Saylor, the chemist of the State Dairy Bureau, only to find that he had obtained the same results. Now, in using the Babcock test we again ran into trouble by having defective glassware; so that we have dropped from our accounts the first year's work for inaccuracy, finally sending East for a gross of guaranteed bottles. These we carefully test before using with a bottle sent out as a standard by the Pennsylvania Agricultural College.

**WHAT SINGLE COWS HAVE DONE.**—Perhaps some of the individual records of the herd may be of interest: Lady Kathleen (22913) has not in six years fallen below 550 pounds of butter yearly, even when she calved twice in the year. The records for the past three years are as follows: 629, 657 and 639 pounds. Her yearly butter fat average hovers around 4.7%. In January, 1897, she was tested for four weeks, with the following result: First week, 20 pounds 3 ounces; second week, 22 pounds 2 ounces; third week, 21 pounds 3 ounces; fourth week, 23 pounds. The health of this cow is wonderful, as she has never been off her feed a day, nor has she ever been out of milking since she came into the herd.

Lady Bonita (21813) is a smaller cow and handsomer. Her last year's record is her best and stands at 599 pounds. She is never below 575 pounds, but can not quite reach the 600 mark. Her best four weeks' test is as follows: First week, 18 pounds 2 ounces; second week, 19 pounds 1 ounce; third week, 18 pounds 4 ounces; fourth week, 18 pounds 6 ounces; with a yearly average of 4.4% of butter fat.

Lady Kathleen's daughter, Minnewawa, with her second calf, made 536 pounds of butter.

Lady Bonita's daughter, Lady Malaga, gave 9870 pounds of milk with her second calf. Another daughter, Lady Sultana, two years old, is making 30 to 45 pounds daily. But we will not multiply records by giving those of the Mechthilde and Bijou heifers, of Drussa, Fidessa, Aralia, Wakalona, Mountain Juliet, Starflower and Lanark—all nearly as good. All these records are made on the basis of the actual butter product, or placing the overrun at 12%.

When we think how easily we raised these fine animals, which as heifers have returned us as much butter as did many of the aged grades, the foolish delusion of waiting years to develop a dairy herd from common stock will never again enter our minds.

**THE DEAD LINE.**—The most important thing, next to good blood, is holding to a high standard by dropping out the unworthy cows and by feeding the good ones well. We have each of our cows numbered with a Dana ear-tag, the full bloods having their registry number, while the grades have the ranch name and a number from 1 to 1000. As no records are kept of the birth of the grades, we begin a new hundred with the year. In this way we know at once the sire of any cow, as we know the year each bull was used on the grades, as well as approximately the age of every cow. The ledger account is kept by the number of the cow, and she is accredited by her monthly Babcock test; against this is charged the cost of feeding, milking and care. If she does not show a profit of \$50 she is condemned to make beef for the ranch table, without some very special cause can be shown for her delinquency.

**THE FEEDING.**—The price received for butter during the past five years has been 27½ cents per pound, while the cost of feeding, milking and making the butter has amounted to \$51.06 per cow. As this includes two extremely dry years, it is certainly the maximum cost. In feeding, the poorer cows do well on one pound of cocoanut cake, two pounds of bran, mixed with six or seven pounds of short oat hay, finely chopped and made wet; at night eight pounds of alfalfa hay is given; during the day all the silage they will eat, which amounts to about forty pounds.

The good cows—those producing between 400 and 500 pounds when in full milk flow—receive as a regular ration six pounds of bran, two pounds of cocoanut cake and two pounds of barley, if we are feeding corn silage; when the silage is alfalfa we change the barley to corn. For roughage they receive eight to ten pounds of alfalfa hay, and all the silage they will consume. It is not necessary to feed a cow long on this



heavy ration, only when she is milking heavily and not gaining in flesh; when fattening becomes obvious, it is time to shorten up on the feed. We are often amused to hear and to see the complacent manner with which many people will tell us of the cow that is reduced to a mere framework because she is so famous a producer in the milk string. Now, either these people are cruel in starving a poor beast, or else that cow is not healthy, for if a cow has not vitality enough to keep herself first, she is not a profitable animal in the long run, any more than the brood mare that in plowing grows thin, while her mate remains well nourished. As a matter of profit no one can afford to cut the food supply so short that the cow runs down in health, for it is the surest way to cultivate tubercular diathesis in the herd in time, while the immediate result will be feeble calves, and often the cow will with her next calf fall off enough in milk to rest while she regains her strength. The same thing is found when a herd is fed for the first time; the cows which respond first are often the beefy ones that soon drop out, while the dairy animal is stowing away fat inside to meet the demands when she freshens of a prolonged milking.

**THE BREED.**—As you see by the foregoing, we use Holsteins. Now, naturally, as we have been successful with them, they have our preference; the breed you may have and have been successful with you naturally prefer. This is as it should be, for, if intelligently handled, all the milk and butter breeds are profitable, for they are the results of the best dairy brains of many practicable people all working toward the same end. It is well, however, to remember that there are strains in every breed which has not been forced for fancy points, that have naturally greater constitutional stamina. To this we must look, not only for the health of the cows, but for the welfare of the consumer of dairy products.

**PRACTICE OF G. F. CORNISH, Clarksburg, Sacramento County:** During the year 1899 I milked twenty-four cows—some of them fresh, some heifers on second calves, and some strippers—not milking at any one time over nineteen cows. I dispose of my milk to the Star Creamery at Courtland, and the following are the figures returned for the year for milk delivered by me:

	Pounds Butter per 100 lbs. Milk.	Pounds of Milk.	Oil Test.
January.....	4.93	7,422	4.4
February.....	4.44	7,087	4.0
March.....	4.44	8,564	4.0
April.....	3.98	7,840	3.6
May.....	4.21	15,255	3.8
June.....	4.21	14,875	3.8
July.....	4.21	15,123	3.8
August.....	4.21	13,185	3.8
September.....	4.44	11,779	4.0
October.....	4.44	12,515	4.0
November.....	4.44	13,280	4.0
December.....	4.44	12,897	4.0

This makes an average test of 3.61, and an average of 4.38 pounds of butter to 100 pounds of milk, showing the entire herd of twenty-four cows—fresh, heifers, strippers and dry cows—to have produced an average of over 255 pounds of butter for the entire year. In addition to this, my family used upward of a gallon of milk per day during the year.

**BULLS OF DAIRY ANCESTRY.**—As to the breeding or management of my herd, I will state that I commenced dairying about twenty-five years ago on the Sacramento river, using as a foundation stock the ordinary native cow. I have made it a practice always to save the heifers from my best cows only, and to keep no cows in my herd which did not give a good quantity of milk of a good quality, and hold out well in their milk during the year. For bulls, I have not been particular as to breed. I have always insisted that the bull I used should be from a superior butter-making cow; preferring a bull of unknown breed from a great butter-making cow to a bull from one of the fancy dairy breeds whose mother had only average merit. During the twenty-five years I have used sires of native breeding—graded Shorthorns and graded Jerseys—finding sires of each of these descriptions very satisfactory.

**FEED.** My cattle are fed altogether upon alfalfa—alfalfa pasture during the day and alfalfa hay in the stack to run to at night. I feed no grain nor roots of any kind. The cattle run in the open air, except on extremely stormy nights, when they are sheltered. I have found from experience that the cows do better by being permitted to run out than when confined at night in the barn.

In feeding alfalfa I have obtained better results from feeding cured alfalfa, or alfalfa which has been cut for several days and fairly well dried than from feeding fresh cut or green alfalfa. I also obtain better results by feeding hay, where the cows have free access to it at all times, than I have by feeding them at stated periods.

I feel satisfied that my herd under its present conditions and breeding would average 300 pounds of butter per cow per year if given a grain ration equal to that fed in dairies where the highest yields are obtained.

If at atmospheric pressure the temperature of the boiling water is 212° F., at 80 pounds pressure it would be 322.5° F. The total heat in the steam at atmospheric pressure would be 1.147 heat units; at 80 pounds pressure, 1.182 heat units.

## HORTICULTURE.

### Lake County Pears—A Refutation.

TO THE EDITOR:—In the PACIFIC RURAL PRESS of the 14th inst., under the heading "Agricultural Review," you quote from the Sonoma County Farmer of July 6th to the effect that "J. N. Belveal stated that the Lake county pear crop failed to develop seeds and will not stand up for long-distance shipment, although it is all right for canning."

The Cloverdale Reveille says: "J. N. Belveal of Porter Bros., Healdsburg, says the Lake county pears can not be shipped East this season, as the fruit is without seeds, which prevents shipment."

The Lake County Bee, of even date, in commenting editorially upon the above, says in part: "It is looked upon by many growers as an unwarranted attempt to injure the reputation of Lake county fruit, in order that the buyer may be able to procure it at a smaller price. \* \* \* \* \* The report seems to be entirely incorrect. \* \* \* \* \* The Bee has interviewed numerous growers from Big valley, Kelseyville and Scott's valley, and they all denounce the report as being absolutely without foundation. A representative of the Bee visited F. W. Gibson's orchard and examined pears from all parts of it. Of all that were cut open not one was found without seeds."

I have personally interviewed the leading pear growers of this section of the county, all of whom have carefully tested their orchards, and not one of them found a single pear without seeds.

I find that Mr. J. N. Belveal of Porter Bros. last visited this section on March 4, 1900, to learn the local status in the proposed prune combine. At that date pears were just beginning to "set," and no man could have told as to the presence or absence of seeds. I can find no grower who has since sent to him or his firm any samples of pears. I send by express to the PACIFIC RURAL PRESS uncultivated Bartlett pears from different orchards.

Pear raising is but in its infancy with us, promising soon, however, to be our leading source of revenue.

In the section adjacent to Clear lake there are, according to the assessor's table, 16,375 pear trees in bearing, and 50,320 less than one year ago. Many thousands more would have been planted had trees been available. From the present outlook, 100,000 will be planted this season.

Prof. Wickson, Prof. Fowler and others from the State University, who have conducted farmers' institutes here, have used every effort to cause the Lake county farmer to see the advisability of planting all suitable land to Bartlett pears, in place of grain, prunes or hops.

Lake county pears have already made their reputation and have for the past two years been quoted at 25 cents per box higher than any other Bartletts on the market, owing to the fact that they possess a higher percentage of sugar, have a finer flavor, come in later and are better keepers than from any other section of the State.

It seems hardly probable that Porter Bros. should sanction such a report from their representative with the sole object of depressing the market, as suggested by the Bee. They certainly realize that such a short-sighted policy must have a boomerang action. The resulting injury to us lies not only in the effect upon the market, but tends to timidity the local farmer and cause him to keep in the old rut which he was about to leave.

We ask the PACIFIC RURAL PRESS to lend us assistance in fostering our infant industry, which offers every promise of soon being able to take care of itself.

CLARENCE W. KELLOGG.

Lakeport, Cal.

[The pears are all right and perfect specimens in every respect. We are thankful to Dr. Kellogg for the interest he has taken in showing the matter up so effectively.—ED.]

### Date Palm Suckers for Distribution.

TO THE EDITOR:—The Department of Agriculture has on hand for immediate distribution some twenty suckers of the "R'ars" date palm from Algeria. The R'ars is one of the earliest varieties appreciated by Europeans. It is considered by Mr. W. T. Swingle, under whose direction the importation was made, to be well adapted for cultivation in the warmer parts of the San Joaquin and Sacramento valleys. The Department is ready to consider applications for these suckers, which should be ready for distribution about August 1st. They will require watering three times a week for the rest of the summer, and any drying out of the ground during the first summer will be fatal.

JARED G. SMITH,

Assistant in charge of Seed and Plant Introduction, U. S. Department of Agriculture.  
Washington, D. C., July 17.

WM. THOMPSON, or Lord Kelvin, is doubtless the "foremost scientist of the age." He is 76 years old, and in nearly every department of applied science has made discoveries, created new things and aided general advance in organized knowledge.

## THE FIELD.

### This May be Suggestive to Squirrel Killers.

It is just the time of the year to work an effective campaign in poisoning ground squirrels. We gave last week a recipe which has proved very effective, but it is rather expensive to use on a large scale. There has just come to hand a preliminary report on large scale poisoning of prairie dogs in Nebraska, which will be very suggestive to California squirrel poisoners. It is by A. T. Peters, animal pathologist of the Nebraska Experiment Station:

**THE RECIPE.**—Dissolve three ounces of strychnine and one-half pound of potassium cyanide in one quart of boiling water; then add two quarts of molasses and one teaspoonful of oil of anise; stir. Then place one bushel of wheat in a tight receptacle (so there will be no loss from leakage) and pour the foregoing solution over it. It should then be well stirred while an assistant slowly sprinkles into the mixture four pounds of finely ground corn meal. The molasses renders the liquid adhesive, so that it will cling to the grains of wheat. The object of using the corn meal is to absorb the superfluous liquid or syrup and thus enable the grains of wheat to carry a larger amount of poison.

**RESULTS.**—This preparation has been distributed in a very large town of between 500 and 600 acres. A teaspoonful was placed in and around every hole. The results were very gratifying, as it was demonstrated that fully 90% of all the dogs were killed at the first application. Within twenty-four hours there were large numbers of them lying dead on the ground. Some were found lying at the opening of the burrow, while some could be seen far down in the hole, and no doubt many died at the bottom of their burrows.

**INSTRUCTIONS.**—The results obtained from the above experiment leave little room for doubt that the prairie dog can be exterminated in a short time if the work is done in a thorough manner. In doing this work the following instructions should be rigidly adhered to:

First, in preparing the poison great care should be taken that the exact proportions are used; that the cyanide of potassium and strychnine are completely dissolved; that no more water and syrup are used than the recipe calls for, as one bushel of wheat will not take up and carry more than this amount of liquid. After the liquid has been poured into the wheat the whole should be well stirred until all of the wheat has come in contact with the syrup and the poison is equally distributed through the whole mass. It should be used the same day that it is prepared, in order to obtain the best results. The way to apply this is to take some of the poisoned wheat in a tin pail and sprinkle about a tablespoonful of it in and around each hole. Do not leave it in lumps or bunches, as cattle or other stock might possibly eat it, although our experience showed that the danger from this is not great, as cattle were allowed to range over the towns that were being thus treated, and none were injured. It is best to take a strip about 2 rods wide, set stakes at convenient intervals to avoid going over the same ground twice and also avoid missing any of the holes. Where there is more than one person operating, the stakes may be set to indicate the ground that is being gone over, the operators keeping about 2 rods apart and changing the stakes over to the outside as the person next to the poisoned ground comes to them. The poison seems to do its work within forty-eight hours. In about a week or ten days the town should be gone over a second time, as there will be, of course, some dogs left, of which about 50% will usually be killed by the second application. During the mating season in the spring the remaining dogs will congregate, and then as soon as the young ones begin to appear above ground the poison can again be distributed.

**GENERAL WARFARE.**—An important matter in the extermination of prairie dogs is to organize a general crusade against them, as they will migrate from near-by towns as soon as the grass becomes abundant on land where they have been exterminated. In order, therefore, to make the destruction complete, war should be made on them over a large range of territory. The amount of the mixture required is about one bushel to 160 acres in the case of an average town. The number of holes to the acre ranges from 90 to 150. Four men will easily cover 160 acres in a day.

The new engines of the Denver & Rio Grande Railway have iron pipes extending along the roof of the cab, connecting with the boiler. Through this pipe, without making a perceptible motion, either the engineer or fireman can send, under 200 pounds pressure, a jet of steam and boiling water that would effectually kill or injure anything living that happened to be on the tender or the front end of the baggage car. The blow-off cock thus arranged is expected to prevent train robbers climbing over the tender.

"The lightest substance known" is the pith of the sunflower, specific gravity 0.028. The specific gravity of cork is 0.24.



## Agricultural Review.

### ALAMEDA.

**APRICOTS BADLY AFFECTED.**—Niles Herald, July 20: The Moorpark apricots in this vicinity have been attacked with a dry rot and in many places the loss will be a quarter of the crop. It appears to be the result of a fungus in the air and does not seem to affect the fruit until just as it begins to turn color. None of the other varieties, as far as reported, are subject to the trouble. Mr. Barry has submitted samples of the affected fruit to scientific men for examination. Among the orchards badly affected are those of Joseph Nichols, H. J. Tilden, C. B. Overacker and others in that neighborhood. Prunes are reported to be dropping badly in the Santa Clara valley. Wm. Barry visited the orchards of J. H. and W. W. Durham, Osgood McCollough, Lincoln, Silvey and others around Irvington, and reports the crop the largest he has ever seen and no dropping whatever.

### BUTTE.

**HEN RAISING QUAIL.**—Honcut Times: C. W. Jackson has a hen that is acting as a mother to nineteen young quail. The youngsters are a month old; they stay with the hen and in every way deport themselves as ordinary barnyard fowl.

### FRESNO.

**DRYING PEACHES.**—Sanger Herald, July 21: Cutting peaches began last Monday, and everybody is looking for help, women and girls being preferred for this work. The ruling price for cutting Freestone peaches is 5 cents per box (50 pounds), and many are earning from \$1 to \$2 per day. All earn their honest dollars and seem to enjoy the getting—even the daughters of some of our most prominent citizens. They do not think it beneath their dignity to earn pin money by preparing fruit during the busy season, which will last about six weeks. By that time they will have earned sufficient funds to clothe themselves nicely and take a few weeks' vacation on the coast.

**CANNING BEGUN.**—Fresno Republican, July 19: Peach canning began this week in the canneries. The work has been slack, however, and full force of employes will not be put on the fruit until next week. There was a slack-up on work between the apricot and peach seasons, but probably there will be none from now on until all the fruit is put up—about October 1st—as early peaches, plums, pears, late peaches and other fruits will keep the canneries busy until that time. The pack of canned apricots was very large this year and of very good quality. The Tenney Co. put up 15,000 cases and Griffin & Skelley packed 10,000 cases in their new cannery.

### GLENN.

**NEW LAND AND WATER COMPANY.**—Orland Register: Papers have been filed which announce the formation of the Lemon Home, Water, Power and Light Co., with a capital stock of \$250,000. The directors are A. and M. Hochheimer, S. Ehorn, T. and D. Brown, F. L. and J. N. Spencer. The company has purchased the Brown irrigation system and lands north of Stony creek and several thousand acres of adjoining lands. Engineer Luning of Red Bluff is now surveying the lands, and, as soon as his work is completed, the property will be put on the market in tracts of from five acres up. The irrigation system as now constructed will water from 25,000 to 30,000 acres.

### KINGS.

**IRRIGATION LITIGATION.**—San Francisco Chronicle, July 21: The Supreme Court has affirmed the judgment of the lower court in refusing to grant a change of venue in a suit involving two ditch companies. The Last Chance Water Ditch Co. operated a flume in Tulare county for irrigating purposes, taking water from the Kings river. The Emigrant Ditch Co. constructed a ditch and canal from the river higher up and took all of the water. The Last Chance Co. sued to enjoin the Emigrant Ditch Co. from continuing to take all of the water, bringing the case up in the Superior Court of Kings county. A change of venue was demanded, as the principal place of business and the dam of the Emigrant Co. were in Fresno county, but this was denied. The Supreme Court, in upholding the lower court, said that the damage, if any, was done in Kings county, and the case should properly be tried there.

### LOS ANGELES.

**FAILURE OF PEACH CROP.**—Covina Argus, July 14: The peach crop in the Covina valley is a total failure.

**ORANGES DISPLACING APRICOTS.**—Pomona Times, July 10: The Pomona Deciduous Fruit Growers' Association is shipping off a few cars of dried 'cots this

week. It is fine fruit, though some of it is rather small. This week will close the apricot season. It came on with a rush and was soon ended. The entire season did not extend over twenty days. The output is less than the first estimates. This is owing to the fruit running very small, and to carelessness in gathering. Some growers gathered the entire crop at one picking, thus shaking off some green and some overripe. The culling on such lots was very heavy. Apricots are being taken out on Fred J. Smith's ranch and replaced with oranges. The Claremont Citrus Union commenced gathering its Valencia oranges on Monday. It will have between two and three carloads of these oranges and will get them off this week, and also a car of lemons. Valencias are in demand at satisfactory prices—from \$3 to \$3.50 per box.

### MONTEREY.

**SALES OF APPLE CROPS.**—Salinas Index, July 19: Richard Hambey of the San Miguel canyon has sold the apples from four acres of 6-year-old trees for \$428. C. H. Rodgers of the Pajaro valley is reported to have sold his apple crop from thirty-two acres for four years for \$16,000—\$4000 a year. Mr. Menasco of the Ford & Sanborn Co. has this year sold his apple crop from sixty acres for \$4700. In 1889 he purchased this land for \$6000.

### RIVERSIDE.

**EARTHQUAKE A BENEFIT.**—The San Jacinto correspondent of the Riverside Enterprise avers that the increase in water flowing from canyons in that vicinity, caused by the Christmas earthquake, is fully maintained at this season. It would seem that the increase is permanent and results in great benefit. In one instance there is a steady flow of 50 inches for ten hours daily, where there was not enough water for any use before the earthquake.

**APRICOT SEASON ENDED.**—Los Angeles Herald, July 21: After a three weeks' flood of fruit in San Jacinto valley, the apricot season has ended very successfully. The hot spell, which ripened the fruit all at once, made it impossible to handle the product, and consequently about 100 tons were lost. The yield of the valley has been 500 tons, which, at the present market price, is worth \$62,000. The quality is fine and the growers are greatly pleased. About \$8000 has been paid out during the season for help. The peach season will begin in about three weeks, though the crop will be light. The prune crop will not amount to anything. Pears will yield well this year.

### SACRAMENTO.

**CREAMERY INCORPORATED.**—Sacramento Record-Union, July 22: The Isleton Creamery Company has filed articles of incorporation, with a capital stock of \$10,000. The directors are P. H. Gardner, Hart F. Smith, J. L. Aldrich and J. S. Desrosier of Isleton and E. A. Runyon of Courtland.

**FRUIT SHIPPERS FAIL.**—Sacramento, July 21: Westfall Bros., a prominent firm of fruit shippers, has suspended. The cause given by William Westfall is that the deciduous fruit season has been disappointing, and that, while the contracts made early in the season were at prices that promised at least a fair profit, the Eastern market has been so bad that prices realized have not amounted to freight, and refrigeration on pears and plums and other fruit has been a total loss to the shippers for the past month.

### SAN DIEGO.

**HIGH PRICES FOR LEMONS.**—San Diego Union, July 19: Lemon growers have still more cause for rejoicing. Prices are now higher than they have been at any time this season. From 2 to 2½ cents a pound is being paid to growers and the demand is very good. Shipments are not as large as they were a month ago, as it is estimated that an average of about twenty-five carloads are being shipped every week. A local shipper states that the quality this year is better than it has been, and that the percentage of decay is less. The packing houses are still kept busy, although the force employed is not as large as it was for several weeks preceding the Fourth of July, when the demand was greatest. One lemon packer said that there will be no interim between this season's and what is known as next season's crop, thus making practically one continuous crop year in and year out. As a rule the new crop begins to ripen about the first of October, but it will be much earlier this year, and some of the fruit is expected to be ready for picking next month.

### SAN JOAQUIN.

**SHORT WHEAT CROP.**—Stockton, July 19: Experts say that the wheat crop is going to fall far short of the estimates made six weeks ago. The first figures placed the yield at from 750,000 to 1,000,000 tons, but reports from the principal

wheat centers now indicate that farmers will be fortunate if they harvest 600,000 tons. This is surprising to those who visited the fields before the harvesters went to work. The grain appeared to be exceptionally fine and well filled, but where it was expected that from fifteen to twenty-two sacks would be secured to the acre, only eight and ten are being cut. This is not true of every ranch, but of a sufficient number to greatly reduce the total crop. This shortage is said to be due in some localities to several days of hot weather about the time the wheat was "in the milk." It was badly scorched, and, though it seemed to be maturing as usual, it turned out to be pinched, till the yield is only a little over half what was expected. In other sections an insect worked on the roots of the plant till it reduced the sap in the stalks and affected the grain.

**PUMP MAKERS INCORPORATE.**—Stockton Mail, July 19: The Wright Pump Manufacturing Co. has incorporated. The capital stock is \$10,000. The directors are Parvin Wright, J. Jerome Smith, E. A. Whale, E. D. Parker, Joseph Swain.

### SAN MATEO.

**AGRICULTURAL FAIR.**—San Francisco Chronicle, July 20: The directors of the San Francisco & San Mateo Agricultural Association have announced the light-harness programme for the coming meeting. Entries for all the events close with Edwin F. Smith, 202 Sansome St., San Francisco, on August 15th. The prize list, together with the rules of the coming fair, have been issued and can be obtained by intending exhibitors. There are six departments, divided into numerous classes. The competition is open to the world and the award ribbons will be of neat and tasty designs. The premiums run from \$10 to \$100 in every department, except E and F.

### SANTA CLARA.

**NEW FRUIT WAREHOUSES.**—San Jose Mercury, July 19: The Phoenix Fruit Packing Company has commenced the erection of a three-story warehouse, 150 feet long by 50 feet wide. The new firm has contracted for the most approved machinery and appliances for the handling of both green and dried fruit. Castle Bros. have under way a large building that is to be used as a shipping station for the fruit which this firm handles.

**DIRECTORS ELECTED.**—Mercury, July 20: At the annual meeting of the stockholders of the Santa Clara cheese factory the following directors were elected to serve for the ensuing year: R. McComas, R. McCubbin, W. Billings, Charles Parker and James Sutherland. The cheese factory has been closed for some time and some of the directors favored converting the factory into a creamery, but no action was taken.

**PRUNE CROP.**—Another week has brought no improved prospects for prunes. On the contrary, what was evident three weeks ago to a careful observer is now plain to every one. Prunes on hundreds of acres are wilting, turning red and blue, and dropping off. At least one case of the plum rot has been brought to our attention. This rot usually comes at a ripper stage of the fruit. California will produce this year a limited crop of as fine prunes as was ever seen, and we think a larger proportion of very small and nearly worthless fruit than has ever before been seen. This prospect is developing more and more, and we think the fixing of prices should be held open for two or three weeks yet in order to fully understand the situation.

**FRUIT UNION WILL BECOME PACKERS.**—Mercury, July 17: The Santa Clara County Fruit Union has leased the Webber warehouse and is making preparations to become an active factor in prune packing. The union, which is composed of growers, was organized last year, and during the season handled over 100 carloads of prunes. With the additional facilities now secured, the officers of the union expect to handle between 200 and 300 carloads. The members of the organization belong to the Cured Fruit Association, and the union is governed by the contract existing between the association and the Packers' Company, being subject to the same restrictions as the other packing establishments.

### SHASTA.

**NEW IRRIGATION PUMP.**—Anderson News, July 14: The new 18-inch pump of the Belle Vue Irrigation Company was started up last Sunday. It is a success in every particular and pumps a stream of water as large as a small river.

**FIRE BURNS GRAIN AND ORCHARD.**—Redding, July 23: Sparks from engines caused three fires near Anderson yesterday. One was serious, 600 acres of grain being destroyed and a 30-acre orchard ruined. The burned property is owned principally by N. B. Frisbie of San Francisco.

### SOLANO.

**VEGETABLE GROWING.**—Vacaville Reporter, July 21: Probably the vegetable crop produced almost entirely in the hills north of town will bring to the pockets of growers not less than \$25,000. In Vacaville township there are over 1000 acres devoted to vegetable growing. Beans, peas, corn and tomatoes prove very profitable, owing to the early date on which they are shipped to market. This year tomato growers have been shipping a second and even a third crop. That it is a profitable year for vegetable men can be understood from the fact that a single acre of tomatoes has netted this year as high as \$150.

**LARGE SUM PAID FOR HELP.**—Every one in Vacaville knows that this year more men and women were given employment during the apricot season than during any previous year, even including 1892, which has heretofore been considered high-water mark. The number employed is hard to estimate, but, since the ranchers pay off through checks, a relative idea of the increase can be secured. Edward Fisher says that in previous years the amount paid to labor through the Bank of Vacaville has never exceeded \$75,000 at the close of the apricot season. This year Mr. Fisher says that there was paid to labor through the bank over \$100,000.

### SOLANO.

**TO THE EDITOR:**—The fruit interests of Suisun are much more extensive than the casual traveler would infer, judging from the unfavorable site of the city. Although surrounded by tule flats, it is an important fruit center. Three extensive firms have packing and shipping houses here—Ernst Luehning, the Alden Anderson Fruit Co. and the Earl Fruit Co. The two latter concerns have shipped to the East the present season 115 cars of green fruits, mostly apricots. E. Luehning and the Alden Anderson Co. are now receiving great quantities of dried apricots, for which they are paying 5 to 6½ cents per pound. Each concern employs about fifty operatives, mostly women or girls, in packing this fruit in boxes. They will ship twice or three times the amount sent out last year. Some fresh pears are now being sent East by the Suisun houses, but the latter fruit will be largely dried by growers, the Eastern market being unfavorable for both pears and peaches. The Alden Anderson Fruit Co. owns or controls 1500 to 1600 acres of orchard in the Suisun valley—800 in the so-called Hatch orchard, 400 in the Pierce orchard and 300 to 400 in smaller tracts. E. Luehning is an extensive buyer of dried fruit from all parts of this county, the product being shipped to his Suisun warehouse and there packed. He will this year handle the almond crop from all the groves in the vicinity of Davisville. The growers agreed to pool their crops, and sold to the highest bidder. Mr. Luehning offered the highest price. It is estimated that this transaction will involve the handling of 150 tons of almonds.

H. G. P.

### SONOMA.

**NEW PACKING HOUSE.**—Healdsburg Tribune, July 19: At a meeting of the Geyserville Fruit Growers' Association, to discuss the matter of building a packing house to be operated under the supervision of the California Cured Fruit Association, the Geyserville Packing & Warehouse Co. was organized with a capital of \$10,000. The following directors were chosen: John Markley, J. A. McMinn, J. W. Cottle, W. V. Griffith, J. E. Metzger, D. W. Sylvester, Ben Wright. John Markley was elected president, W. V. Griffith vice-president and D. W. Sylvester secretary.

### SUTTER.

**A CURIOUS GROWTH.**—Yuba City Farmer, July 13: Several weeks ago Sheriff J. P. Elwell noticed a branch or sucker growing out of the bottom of a limb of one of his French walnut trees in his yard and recently was astonished to see that it had grown about 15 feet straight down to the ground. It is different from the other limbs and grows several feet a week.

**FAIR DIRECTORS APPOINTED.**—Marysville Appeal, July 23: Governor Gage has appointed the following directors for the Thirteenth District Agricultural Society: J. K. P. Elwell of Yuba City in place of W. P. Harkey, resigned, and E. A. Noyes of Sutter county in place of Jas. Littlejohn, also resigned.

### TULARE.

**THE LATEST TRUST.**—Visalia Times, July 19: One of the latest trusts is the threshing machine combine. They charge now \$120 a day or \$10 an hour for less than a day. Mrs. Sloan paid \$110 for threshing 330 sacks. Wheat is not turning out as well as was first expected. The machine men say it costs them \$80 a day to run, and they want \$40 a day on an investment of \$4000.



## THE HOME CIRCLE.

### What a Boy Would Like To Do.

I'd like to be a cowboy an' ride a firey  
hoss  
Way out into the big an' boundless  
West;  
I'd kill the bears an' catamounts an'  
wolves I come across,  
An' I'd pluck the bal' hoad eagle from  
his nest!  
With my pistols at my side, I would roam  
the prairies wide,  
An' to scalp the savage Injun in his wig-  
wam I would ride—  
If I darst; but I darsen't!

I'd like to go to Afriky an' hunt the lions  
thoro.  
An' the biggest ollyfunts you ever saw!  
I would track the fierce gorilla to his  
equatorial lair,  
An' beard the cannybull that eat folks  
raw!  
I'd chase the pizen snakes an' the 'pottim-  
mus that makes  
His nost down at the bottom of unfathom-  
able lakes—  
If I darst; but I darsen't!

I would I were a pirut to sail the ocean  
blue,  
With a big black flag a-flyin' overhead;  
I would scour the billowy main, with my  
gallant pirut crew,  
An' dye the sea a gouty, gory red!  
With my cutlass in my hand on the quar-  
tordeck I'd stand,  
An' to deeds of heroism I'd incite my  
pirut band—  
If I darst; but I darsen't!

An', if I darst, I'd lick my pa for the  
times that he's licked me!  
I'd lick my brother an' my teacher, too!  
I'd lick the follors that call round on sister  
after tea,  
An' I'd koop on liekin' folks till I got  
through!  
You bet I'd run away from my lossions to  
my shoo,  
An' I'd shoo the hens, an' toaso the cat,  
an' kiss the girls all day—  
If I darst; but I darsen't!

—Eugene Field.

### The Doom of Sing Low.

Twenty years ago Sing Low had been a thin, meek, Chinese coolie, toiling in the rice fields of the Soo-chow province. Insufficiently clad and insufficiently fed, he had many times been weary of life, and, but for the vows of his secret society forbidding, would have put a summary end to it—a double quantity of opium in the pipe is an easy way! But Sing Low had persevered and starved until, one day, there was an exodus of many of his own society (now renamed "Sons of the Silver Land") to the western coast of Mexico. With them journeyed Sing Low and his newly married wife, Fay Lee, for there was demand for Chinese colonists, and the promoters told it loudly that there was plenty of money to be made in the "silver land." For once the truth had been spoken by a promoter! Had you, ten years after the exodus, known the Chinatown of Madre de Dios, and the restaurant and "tea place" of Sing Low, you would better appreciate the fact. For the Chinese colonists had made unto themselves a place of their own in the western part of the city, out beyond the marshes; many narrow streets were filled with the shops of the Chinese, who were no longer colonists, but full-fledged citizens.

In the very center of the Chinese civilization, and fronting a view of hot, blue gulf water, Sing Low's name was blazoned in gaudy Chinese script over a tea shop and opium den; while uptown, where Mexicans and mining men most did congregate, another building, made of yellow adobe and pine boards, bore the legend, "Chinese Restaurant of Sing Low: American Pies." In front of this restaurant generally sat Sing Low, but not the Sing Low of the Soo-chow rice fields—far from it. This was a very fat and important Sing Low, in full and flowing Chinese garments, pig-tail neatly wound about sleek and shining head, and silk-shod feet thrust into flapping embroidered slippers. A large, gold, American watch dangled from his sash, and yellow Mexican diamonds glittered on his pudgy fingers

—truly had Sing Low, head of the "Sons of the Silver Land," prospered and waxed fat in a far land.

Inside the restaurant many Chinese waiters and cooks rushed about, serving all sorts and conditions of men at the manta-covered tables. For Madre de Dios was a steamer town, whence hides and silver and bullion were shipped to Lower California and even San Francisco, and many men of many sorts ate chili con carne, and tortillas, and "American pies," in the restaurant of Sing Low. There were dirty Greasers and swaggering be-armed Mexicans, who drank bottles upon bottles of fiery mescal, and calm, deliberate, mining Americans, who consumed untold numbers of pies and American canned beans, while Sing Low smiled from afar, with a keen eye upon collections. For twenty years had he saved and toiled, but another year would see the end. Then with Fay Lee, who was now old and fat, and the twenty thousand Mexican dollars that they had made, they would go to San Francisco. Back to China? No! Fay Lee had once timidly proposed it—for she had no children, and her heart was sick for her native land—but Sing Low said a decided "no." He had not yet forgotten the rice fields. And, besides, in these American lands, even a coolie of low birth could be as mighty as a mandarin; he, Sing Low, had been of no import in China, nor would even his twenty thousand dollars make him a mighty man there. In other words, better to reign in hell than to serve in heaven, or one's native land.

To all of which poor Fay Lee had to consent, of course, Sing Low being a husband of no small persuasive power, particularly when aided with a bamboo stick. And he hesitated not to chastise the wife of his bosom when occasion needed, for did not even the laws of the Christians say "Wives, obey your husbands in the Lord?" Not that it often became necessary to impress this latter fact upon Fay Lee, for she loved the fat, pompous Sing Low now, in the midst of his prosperity, even as she had once loved humble Sing Low of the rice fields. It is the way of many women. And, though there were few friends, and no children for her to caress with affection, she was content to live the life that her husband bade, embroidering his costly garments and waiting on him as though she were his bonded slave, instead of his wife. And during the long hours that he spent in the opium house or in the secret lodge of the "Sons of the Silver Land," she consoled herself with many cups of tea, and admiring thoughts of the brave figure that her "honorable lord" was at that moment of a surety making as the head of his society. Poor Fay Lee!

I say "poor Fay Lee" with a purpose, as you will find. For, even as the best laid plans of mice and men go astray, so did the plans and hopes of Sing Low and his wife vanish into naught—through the fault of the man, of course. Sing Low, to make a long story short, fell in love one bright day. It is a thing that Celestials are not given to, for which reason Sing Low made a bad mess of it, and loved far more desperately than any other Chinaman on record—at least, so his sighing protests to the lady in the case ran. Not that he could be blamed overmuch, for Felipa was the prettiest girl, out and out, who had ever been seen in Madre de Dios—as well as one of the naughtiest. Her brother (a gambler from Mazatlan) had used her many months as a lure, and more than one hapless Mexican had come to grief for her sake, but Sing Low was the best game that she had ever caught.

There is in Spanish a proverb setting forth the same sentiment expressed in our own "There's no fool like an old fool," and never was there an old fool so deeply in love as Sing Low, who soon became the laughing-stock of the entire very mixed population of Madre de Dios. Fay Lee, of course, knew nothing, and supposed that her lord's frequent absences were due to secret society meetings. To be sure, Ah Toy, the sprightly young wife of Sam Lung, had considered it her duty to go to the deceived and neglected wife with a full description of the doings and misdoings

of the faithless one. But Fay Lee had first laughed uproariously at what she considered a joke, and later, believing the tale a malicious lie, had turned her sister Celestial out of the house, with calmly expressed convictions as to the fate in store for liars and scandal mongers who could lift tongue against such an honorable and noble man as her lord and husband, Sing Low. Wherefore Ah Toy had departed, giving expression to many naughty words, and tearfully saying—just as a civilized woman might have done, under similar circumstances—"The next time she meddled in the attempt to open a deceived wife's eyes —"

Placidly indignant, yet somewhat amused, Fay Lee went back to her embroidery and a fresh cup of tea. The incident did not seem of enough importance to repeat to her husband, and it soon escaped her mind. That any one should dare to tell such things of her most honorable and faithful lord, expecting her to believe them! She did believe, however, when very late that same night Sing Low came home, not alone, and much the worse for liquor. He had brought his new wife, Felipa, to her home, he stated, with drunken dignity, and Fay Lee must wait upon her, and see that she had what she wanted. For she (Felipa) was to be honorable mistress of the house, and Fay Lee and the servants must bear themselves accordingly.

Your Chinese wife is no creature of high tragedy, and Fay Lee acted under all circumstances as a well-behaved Chinese lady should, placing perfumed water and powders and silken apparel for the new wife. No attentions were neglected, though Sing Low watched vigilantly for them. And only when her services were no longer needed did the supplanted woman go forth, full of murderous fury and hate, from the house of her husband. She had a cousin who was a high official in the secret society; to him she went. Not that there is any recourse for a Chinese wife if her husband wishes to take unto himself a number two spouse, for it is according to the law. But all things, naturally, should be done in order, and the law of dignity and self-respect had been transgressed by Sing Low, who had not even advised Fay Lee of his intention. It was an insult to her and all her family, which the cousin was not slow to realize. But insults are not a prison offense, and must be avenged privately, wherefore the cousin and Fay Lee said nothing, but bided their time, having in mind a way in which they could be more than avenged.

For quite a long time, as much as a month, Sing Low was exceedingly happy with his pretty young wife. But Felipa was a young woman of much sprightliness, and she had not married the portly old Chinaman for the sole purpose of kow-towing to him, and embroidering his clothes, and waiting on him hand and foot—not a bit of it. And so she emphatically stated. On the contrary, she wished many friends, and pretty costumes, and boxes at the bull fights and the one small theater Madre de Dios possessed. She had no intention of being any man's slave!

And so began the tormenting of poor old Sing Low. He soon learned that in the bewitching Felipa he had caught a veritable Tartar, and that, unless humored, she could and would make his life a torment to him. Wherefore, like a wise man, he promptly gave in to her, and humored her in all things—that is, in all things but one. Despite her every endeavor she could not make him tell her what went on at the meetings of his secret society. On that one subject alone Sing Low remained mute, and no cajolery or blandishments could move him.

As time went on, and the influence of his Mexican wife told on him, Sing Low began to sink lower and lower, both morally and physically. He drank steadily now, and more and more of the "black smoke" became necessary—often he would spend entire nights in his opium house—and even the apple of his eye, his restaurant, with its American pies, began to be neglected. So that many whisperings and reports got about, and more than one high official of the secret society

murmured distrust. Meanwhile, a worn and aged woman (hardly to be recognized as the portly Fay Lee of yore) watched and waited, eager for revenge. And in the secret society of the "Sons of the Silver Land" one of the high officials went about stealthily spreading reports that a traitor was among them; that important secrets had more than once been given away, and that, if not located and dealt with, the traitor would soon accomplish the ruin of the society.

All this came to a head one night, when the most important meeting of the year was held. For more than an hour the rooms of the secret society had been filled with an ominously quiet crowd of Chinamen, who were awaiting in perfect stillness the return of one of the officials who had gone to fetch their erstwhile head, Sing Low. For the first time in twenty-one years he had failed to appear at the meeting of the society, and, more than that, all the private records and documents of the "Sons of the Silver Land" had been stolen. No wonder there was perfect stillness in the secret rooms, and that over in the corner one Chinaman waited, holding a huge razor-edged sword. These things are dealt with quickly among Chinese guilds.

They brought him in presently, the cousin and another society member carrying him, for the honorable head was to much overcome with the mixture of opium and bad cognac to walk of his own accord. He was dropped limply into the corner where the Chinaman and his sword waited, and to a malignantly quiet set of members the cousin showed the precious papers and records that he had just taken from Sing Low's silken vest. The man had been found dead drunk, in a low cantina in the Mexican part of the town, while the society papers and records—had access to only by two men, the cousin and Sing Low himself—were dropping unheeded to the cantina floor, to be seen there of all who might care to read. And, but for the cousin, who had found them in time, the papers would have been distributed far and wide before the setting of tomorrow's sun, and the society, "Sons of the Silver Land," with all its important secrets, would have been ruined, and many of its members implicated in all sorts of crimes and given up to prison cells, or perhaps the gallows. The sin of Sing Low had been a tremendous one, for which no atonement could be made, and there was but one thing to do, so far as his punishment was concerned.

The meeting lasted a long time, and finally Sing Low was released from the hands of his torturers, far more dead than alive. His drunken stupor had lasted but a short time under their hands, and in a frenzy of terror, he awaited what he knew was still to come. The room was very still now, and you could have heard a pin drop as the wretched man was placed on his knees just in front of the masked Chinaman, who held in both hands the great, sharp sword. Another man, the cousin of Sing Low, knelt very quietly in front of him, and drew his bared head and neck down and forward so as to meet the uplifted sword. Then there was deathly quiet as the huge blade ascended. It made a circle and a whistling sweep in the air before it descended slowly, and touched the neck of the condemned. There it stopped. No blood came, and there was no cry or moan from Sing Low, for the reason that the blade had just touched his flesh, and no more. Then the cousin stood up, facing the judge, and the executioner did likewise, holding the sword erect, as he announced solemnly: "Honorable judge, this man is dead!"

Five minutes later, the Chinamen were all hurrying from the hall. Sing Low had been dragged, still on his knees, from the room, and flung into the narrow, weed-choked street outside. He had endeavored to beg mercy, but his lips were stiff and dumb. Then he had clung to the judge's knees, jabbering hysterically, only to be cast aside like a truly dead thing, for a Chinaman lost to caste and his secret society is worse than dead. He had moaned and begged at the feet of his



cousin, but he, too, had passed relentlessly on, paying no attention to a dead man's speech. And so, at last they had all gone—among the crowd Sing Low's own clerks and employees—and the dead crouched, alone and deserted of all, in the darkness of night.

In the early dawn Sing Low stumbled drunkenly homeward—not to the house in which he lived with his Mexican wife, but to Chinatown, for at the last, whether in joy, sorrow, death, or disgrace, the heart of even an Oriental turns to his own people, such as they may be. And Sing Low had no thought for Felipa, much as he had loved her, or even for his restaurant, with its American sign, that had brought him so much money. The Americans or the Mexicans would take him in surely, for had he not money? His own people had cast him out, yet to them he turned.

Posted up in front of the opium den owned by him was a large bill, setting forth his execution. He read it. Two other men, waiters in his restaurant, were reading it at the same time. His stained and torn silken garment brushed against one of them, and the men moved back as if some dead beast were there. To these two men Sing Low spoke, but they seemed to see only empty air where he stood. He went into the opium den, begging for the "black smoke", but no one heard him or saw him. All the men seated and lying about the room were discussing the execution of the once respected Sing Low. Unable to endure it, the poor brute slunk out, and wandered distractedly about the streets. He was dead to his people, and his dead voice was unheeded.

For two days the torture of Sing Low endured. At midnight of the second day he crept into his own restaurant and stole a pistol that was lying invitingly on his desk. The clerk saw it, but said nothing, and did not attempt to prevent the theft. And, with the pistol, Sing Low made his way back to Chinatown, where he read over again one of his own death notices, and standing under it, placed the pistol to his temple and blew out what remained of his poor addled brains.—Argonaut.

#### To Meet Life's Wear and Tear.

The paramount necessity for the preservation of the teeth is that they be kept clean to a point that few either dream of or accomplish. If this were done, the teeth themselves would last through the time during which they are required. The dentist of to-day, after he has removed the tartar and accumulations that, in spite of your vigilance, have been deposited, and brushing each tooth with his tiny brush, which can go into all the cracks and crevices, as it is propelled by a machine that makes it revolve rapidly, gives an object lesson as to what is necessary in this respect. It would be a saving of money and tooth structure to visit the dentist at least once a month for this purpose. In the mean time the tooth brush that one wields himself should be soft, not too large, and it should be kept thoroughly disinfected and renewed at least once a month—preferably oftener. The points of the bristles become worn and in a short time wound the gums. The matter of tooth powders, tooth pastes and mouth washes is very important.

#### Boys, Be Generous.

You are made to be kind, boys—generous, magnanimous. If there is a boy in school who has a club foot, don't let him know you ever saw it. If there is a poor boy with ragged clothes, don't talk rags in his hearing. If there is a lame boy, assign him some part of the game that doesn't require running. If there is a hungry one, give part of your dinner. If there is a dull one, help him to get his lesson. If there is a bright boy, be not envious of him; for if one boy is proud of his talents and another is envious of them, there are two great wrongs and no more talent than before. If a large or a strong boy has injured you and is sorry for it, forgive

him; all the school will show by their countenance how much better it is than to have a great fuss.—Horace Mann.

#### Beauty's Bower.

"Put some finishing touches to your hair to-day, Margaret. There's a new summer boarder coming and he'll be here for supper," said Farmer Brown to a beautiful young girl who stood on the doorstep of the old farmhouse.

"How exciting! Who is he?"

"Never saw him. He wrote that his name was Rex Carl—Carlisle—or something like that."

Three hours later, when the bell rang for supper, Margaret put a few "finishing touches" to her hair and went into the dining-room, where the farmer's family and the new boarder had already assembled.

Margaret took her place without looking at the young man opposite.

"Let me introduce you to Margaret, Mr. — er —"

"Carlisle."

"Yes, yes—Carlisle. Never was good at remembering names," stammered the old farmer. "Mr. Carlisle—Margaret," and with that informal introduction he turned his attention to "dishing up."

Rex Carlisle watched Margaret from under his lashes.

"A perfect little beauty," he thought. "She would grace any New York drawing-room—but such a name!"

Margaret did not once look up after their introduction, and at the close of the meal she quietly slipped from the room.

But, living under the same roof, she and Carlisle often met. Many afternoons found them together, and all the long evenings, while the afterglow lingered in the west, were spent in each other's society.

Carlisle was a society man. He told Margaret much of his life in the city, to all of which she lent a willing ear.

He was looking over the society notes in a big New York daily one afternoon.

"Hello!" he said, suddenly. "Marjory Atherton makes her debut in October. This paper says she will be 'the bud of the season, if only because of her great beauty.'"

Carlisle laughed heartily.

"I wonder how much her father paid for that 'ad,'" he exclaimed. "Marjory Atherton's 'great beauty!' Now that just shows how much you can believe what the papers say. She is the plainest girl I have ever known. We were schoolmates and were graduated the same year. Marjory had red hair and freckles. But she was clever—the cleverest scholar in the whole class. I was only eighteen then, and imagined that she favored me more than she did the other fellows. Not being a susceptible youth to anything but beauty, Marjory's red hair and freckles did not appeal to me."

His companion arose and unconsciously dropped the bunch of flowers that had filled her lap.

The days flew on. Carlisle's vacation was nearing a close.

He found himself wishing that he might remain forever near the farmer's daughter. He marveled at the power exercised over him by this simple little country girl.

One evening as they were sitting on the piazza he remarked:

"There is something about you that reminds me of some one I have known."

Margaret looked up at him curiously.

"It seems that I have known you forever," he went on.

"Yet you have only been here three weeks," she replied.

"Yes, but I have not reckoned time by days or weeks, Margaret. You can never know how I have enjoyed your companionship."

He would have taken her hand, but she arose as if not noticing the gesture and wandered into the sitting-room.

She took a seat at the little old-fashioned organ and began playing. She started an old song—one that he had so often sung in the old days at the high school. He began the song with her, then stopped and listened to Margaret. How strangely familiar her voice, and how sweet!

He went back to the piazza and

listened to her sweet girlish tones. She wondered at his abrupt leave-taking. Quitting the organ, she went out on to the porch. Rex came toward her.

"Margaret," he faltered, "I love you. Can you give me one little word of hope that my love is returned? I am going away to-morrow."

Margaret stepped back and looked up into his face in astonishment.

He saw the look.

"I know that you are surprised," he said eagerly. "I have only known you three weeks. Yet I love you. Will you be my wife?"

"Rex," she answered softly, laying her hand on his arm, "you do not love me, you only love my beauty, and it will fade. I am Marjory Atherton."

#### Nature's Lesson.

Is there a cloud in the azure sky  
That forgets the mission it hath on high?  
Not one.

Is there a star in the curtain of Night  
That forgets to shine with a radiance bright?  
Not one.

Is there a bud in field or bower  
That forgets to blossom into a flower?  
Not one.

The clouds, the stars and flowers bright,  
In a beautiful language speak forth God's might;

While we, frail creatures of the dust,  
Forget, alas, to be even just.

We stand empty-handed, while all around  
There are lives to brighten, now sorrow bound,

There are deeds which our hands should gladly do,  
That would cheer some heart, its journey through.

A kind word here, a good deed there,  
Would scatter sweet blessings everywhere.

—Anna T. Hackman.

#### An Academy of Lost Arts.

The University of California is to have a unique adjunct in an "Academy of Lost Arts," soon to be established in Berkeley. This department, which is to be founded and supported by Mrs. Phoebe Hearst, is projected for the benefit of the college girls. Its object is to instruct these up-to-date university women in the household arts.

Mrs. Hearst, in her study of ways to help the Berkeley girls, discovered that many of these students, while parsing Greek verbs and absorbing political theories, did not know how to make bread or sew. Partly to supply this deficiency in the list of courses Mrs. Hearst has arranged to start a school where girls who wish may learn the useful domestic arts, and at the same time increase their stock of pin money.

With the beginning of the University this school will open. For the first year its work will be largely an experiment, with the intention of greatly enlarging the successful features in the following year. The work will begin with a sewing school, to which a cooking class will probably be added soon. The number of students will be necessarily limited at first. The rooms are to be open every week day, and the classes are to be so arranged that the co-eds may attend at the hour which best suits the demands of their University lectures.

Miss Nellie Church has been engaged as the sewing instructor. Her classes are to be arranged in a progressive system. The incoming pupils will be given the plainest kind of needlework, being advanced to finer and more difficult forms as they show ability. For this work they will be paid at the rate of 20 cents an hour, with a strong incentive to improvement by an increase in the wages as the girls advance from class to class.

The products of the academy are to be placed on sale, their proceeds to go toward making it self-supporting. Sample articles of ladies' and children's clothing have been made in New York on the latest patterns for use as models. These models may be inspected by intending purchasers and orders given from them. Miss A. M. Hicks, who will superintend the school, will receive visitors, but they will not be allowed to enter the classrooms.

If the venture is successful, Mrs. Hearst promises to extend the academy in many directions next year.

## DOMESTIC ECONOMY.

### Small Economies.

For some time it was quite a puzzle to me to know what to do with bits of dry bread which contained molasses, graham especially; but I find that they make delicious griddle cakes, says Mrs. Lincoln, in the American Kitchen Magazine.

Soak the crumbs in milk just beginning to turn until it is loppered, stir, mash and rub through a sieve—I use a vegetable masher—then add entire wheat flour, sugar, eggs and soda as needed. I have no definite rule, so can't send it.

I noticed some months ago some correspondence saying that brown bread did not warm over nicely, which quite surprised me. I will give my method of warming up breads of all kinds, most of which are very nice this way, though some few, as the more delicate muffins, are hardly improved.

Dip the things to be warmed quickly into water and put on a pan in a hot oven, turn once or twice while heating and let them heat thoroughly; serve hot.

A whole or half a loaf of bread can be freshened by this method and will taste almost like new bread, while having a delicious crispness to the crust and not being injurious as new bread.

In my family I occasionally have had a nice piece of rare steak left which it seemed a pity to put into any warmed-up dishes, and yet which was not quite nice when reheated in the spider or broiler. Now I take pains to leave it after the meal covered with the gravy and protected from the air so that it will not dry. I also put it on a plate which can be set in the oven. When ready to serve I put it closely covered into the oven for just long enough to heat through, when it will take a keen taste to know it from fresh cooked steak. The secret lies in not leaving it one minute too long and not allowing the outside surfaces to become dried.

### How to Cook Cabbage.

Cut an ordinary sized cabbage into eight equal parts, remove the stalk, wash the cabbage and drain. Put four or five quarts of water into a kettle. When it is boiling rapidly add a level tablespoonful of soda, put in the cabbage; have a hot fire so it will boil up as quickly as possible, then take off the cover and leave it off. Every few minutes push the cabbage down under the water, which must be kept boiling rapidly.

In twenty-five or thirty minutes it should be tender; place in a colander and press with a small plate till the water is all squeezed out.

Put a teacupful of cream in the kettle if you have it, if not use milk and a little butter; return the cabbage to the kettle; the moment it boils up turn into a hot dish.

### Salads Twice a Day.

Mrs. Rorer thinks that salads should be served twice a day. She says: Do not put a large plate of lettuce on the table for each guest to dress; but have the salad served, neatly dressed, and nicely garnished. Sprinkle over your lettuce one day a few cold cooked peas; another day string beans finely sliced; another, chopped tomato; chopped tomato and cucumber; a few beets that have been left over, daintily chopped, or cold asparagus. Cauliflower may be covered with chopped parsley and served with French dressing.

Do not throw away a sponge because it appears to be good for nothing. Very often old sponges can be made to be as good as new. Make a strong suds with hot water and soap, dissolving in it a small handful of washing soda. Plunge the sponge into this and allow it to soak for some time, then knead and rub it until perfectly clean. Rinse in very hot water, then in tepid water until every particle of soap has disappeared. Lay on a clean cloth in the sun to dry.



## Cured Fruit Association Bulletin.

To THE EDITOR:—The conditions that existed relative to the prune drop when our last bulletin was issued still continue. The June drop has extended into a July drop. The causes that operated to produce the heavy drop have also affected many prunes that will remain on the trees until the first picking. The complaint of defective prunes is quite general. Reports from some sections also are that the prunes are hanging largely on the ends of the limbs. These conditions serve to diminish considerably the crop estimates made ten days ago.

There is a notable lack of uniformity in the condition of prune orchards. In some the fruit is large and in prime condition; in others small and containing much that is blighted. This will result in a wide difference in the quality of the fruit offered for sale. All fruits are ripening much earlier than usual. Prune picking will commence in many sections by August 1st.

Growers are advised that a thorough system of inspection is being inaugurated to prevent blighted and defective fruit from being marketed. It will, therefore, be to their advantage and save the inspectors much annoyance if the defective and blighted fruit, which usually drops first, is picked up and destroyed or fed to hogs. In previous years this fruit has been worked off on the market at some price to the detriment of the fruit industry of this State. No defective or diseased fruit will be received or marketed by the association.

Harvesting of the peach crop has already commenced. The crop is large, and the fruit promises to be of good average quality.

The apricot crop is practically gathered. The fruit runs to small sizes, but is of prime quality. The canners have absorbed much of the largest and best.

A moderate summer temperature prevails throughout the State and conditions are favorable to the further maturing of deciduous fruits.

CAL. CURED FRUIT ASSOCIATION.  
San Jose, July 25th.

## List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
PIONEER PATENT SOLICITORS  
FOR PACIFIC COAST.

FOR THE WEEK ENDING JULY 10, 1900.

- 653,373.—GAS GENERATOR—C. A. Bacon, Lockford, Cal.  
653,375.—MUSICAL WHISTLE—M. Barthel, San Jose, Cal.  
653,465.—HARVESTER—D. Best, San Leandro, Cal.  
653,210.—NUT LOCK—C. O. Bulmer, Nooksack, Wash.  
653,376.—POPGUN—A. E. Chapman, Placerville, Cal.  
653,619.—STOVE—L. A. Devin, Sacramento, Cal.  
653,503.—DOOR FOR DIGESTERS—P. F. Dundon, S. F.  
653,571.—GAS BURNER—J. P. Farmer, Portland, Or.  
653,622.—GAS STOVE BURNER—J. P. Farmer, Portland, Or.  
653,385.—POTATO CUTTER—Howell & Chamberlain, Montague, Cal.  
653,386.—BICYCLE CARRIER FOR CARS—A. Hunter, S. F.  
653,397.—COUPLING—J. W. Pettijohn, Montesano, Wash.  
653,532.—RAIL JOINT FASTENING—F. W. Schimmel, Portland, Or.  
653,404.—PORTABLE BED—Seitters & McDonald, McMinnville, Or.  
653,534.—CARBURETOR—J. E. Shearer, Chico, Cal.  
653,325.—EXTRACTING PRECIOUS METALS—Tatro & Delius, Seattle, Wash.  
653,632.—VARIABLE SPEED GEARING—G. W. Waltenbaugh, S. F.  
653,633.—VARIABLE SPEED GEARING—G. W. Waltenbaugh, S. F.  
653,431.—TRUCK—G. M. Williams, Santa Rosa, Cal.  
653,634.—CAR BRAKES—S. F. Woodworth, Clipper Gap, Cal.

COE'S ECZEMA CURE \$1 at druggists. 25c size of us. Coe Chem. Co., Cleveland, O.

## Length of the Canning Season.

Hubert Dyer has prepared a table of the duration of the fruit canning season in California, showing earliest and latest days packing for a period of thirty-seven consecutive years in San Francisco, as follows:

	Inclusive
Asparagus.....	Apr. 6 to June 12
Strawberries.....	May 8 to Oct. 23
Peas.....	May 13 to June 21
Gooseberries.....	May 22 to June 19
Cherries (red and white).....	May 29 to July 12
Currants.....	June 6 to June 28
String beans.....	June 13 to Dec. 1
Blackberries.....	June 19 to Sept. 1
Apricots.....	June 21 to Aug. 25
Green Gage plums.....	July 19 to Sept. 18
Egg plums.....	July 20 to Sept. 23
White free peaches.....	July 22 to Oct. 15
Yellow free peaches.....	July 23 to Oct. 17
Nectarines.....	July 24 to Sept. 6
Pears.....	July 25 to Sept. 26
Yellow cling peaches.....	July 29 to Oct. 12
Golden Drop plums.....	Aug. 7 to Sept. 5
White cling peaches.....	Aug. 10 to Oct. 9
Damson plums.....	Aug. 20 to Oct. 23
Tomatoes.....	Aug. 28 to Nov. 16
Grapes.....	Sept. 4 to Oct. 30
Quinces.....	Sept. 14 to Nov. 10

From the above it will be seen that the entire canning season in the metropolis lasts only five days of lasting two-thirds of the year, viz., from April 6 to December 1, inclusive, and there are only three full calendar months in the year during which no canning is done.

## Breeders' Directory.

## HORSES AND CATTLE.

**HOLSTEINS**—Winners over Jerseys of EVERY butter contest at State Fairs for last six years. Aged 4-yr., 3-yr. and 2-yr.-old classes, except 1st on 2-yr.-old in 1895. Last year every butter prize awarded won by my herd, except 2nd for 2-yr.-olds, 21 Jerseys and Durhams competing. F. H. Burke, 626 Market St., S. F.

**BULLS**—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times, either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

**PETER Saxe & Son**, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs. Correspondence solicited.

**JERSEYS, HOLSTEINS & DURHAMS**. Bred especially for use in Dairy. Thoroughbred Hogs, Poultry, William Niles & Co., Los Angeles, Cal. Breeders and Exporters. Established 1876.

**J. H. GLIDE**, Sacramento, Cal. Have 70 choice Durham Bulls for sale.

**JERSEYS**—The best A.J.C.C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale

## POULTRY.

**WELLINGTON'S IMPROVED EGG FOOD** for poultry. Every grocer and merchant keeps it.

**SANTA TERESA POULTRY FARM**, Eden Vale, Santa Clara Co., Cal. Illustrated catalogue and guide free. Agents Eclipse Aluminum Leg Bands and Rabbit Labels.

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**MANHATTAN POULTRY & STOCK FOOD** is best. All grocers. Depot, 1253 Folsom St., S. F.

## SWINE.

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**J. P. ASHLEY**, Linden, San Joaquin Co., Cal. Breeds Berkshire, Poland-China and Essex Hogs.

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## ALMOND HULLERS

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## THE NEW EGG FARM.

By H. H. STODDARD.

A practical, reliable manual upon producing eggs and poultry for market as a profitable business enterprise, either by itself or connected with other branches of agriculture. It tells all about how to feed and manage, how to breed and select, incubators and brooders, its labor-saving devices, etc. 12mo., 331 pp., 140 original illustrations, cloth. Price, \$1 postpaid.

**PACIFIC RURAL PRESS**,  
330 MARKET ST., SAN FRANCISCO, CAL.

## Patrons of Husbandry.

## Summer Meetings of the Grange.

To THE EDITOR:—I would like to have every member of the Grange read these words of Geo. B. Horton, Master Michigan State Grange:

"Patrons, do not for a minute entertain a proposition to hold Grange meetings less frequently during the summer than through the winter. If your Grange is working up to its full opportunities in social and mental development, and you have the young people of the community working with you, and you look to the interests of the children as you should do, you will find that the summer and even the harvest months present better opportunities than the winter. If your Grange is doing its duty to its members, by keeping co-operative purchasing well introduced, and you are trying to keep up with the front ranks in general information relative to public questions of interest, then you can not afford to lose a single meeting. For Grange success, don't talk, don't even think about a summer recess. Give us the summer meetings, the pleasant summer evening ride, the joyful greetings, the vases and baskets of flowers, the music and the mirth, and the happy children for Grange success, and others may take the storms and cold winter. Meet on time, do business on time, close and go home on time, and all will favor summer meetings."

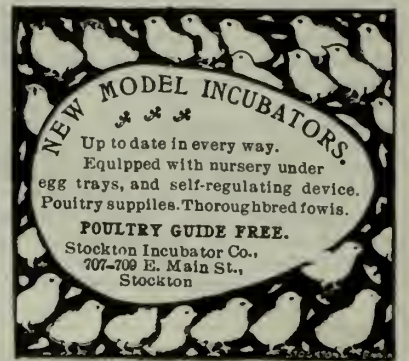
Perhaps all but "the storms and cold winter" will apply to California. San Jose. G. W. WORTHEN.

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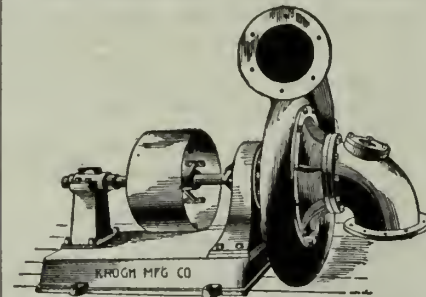
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has been pretty well cleaned out of salable pigs and we have but a few young litters on hand. Our stock is now being put into show condition and we cordially invite every visitor to the State Fair to call at our pens and see the kind of stock we keep. It has always been one of the sights of the Fair and we hope to improve on former exhibits.

In answer to inquiries we will describe any stock we think will suit you.

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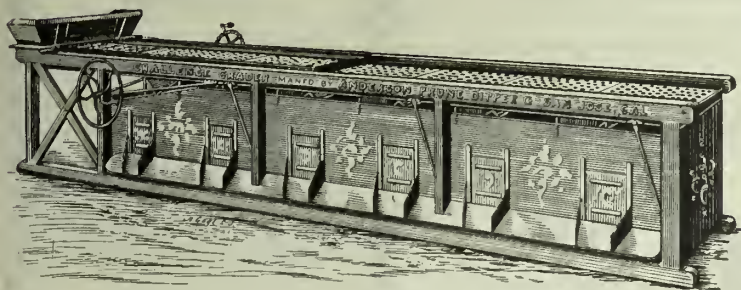
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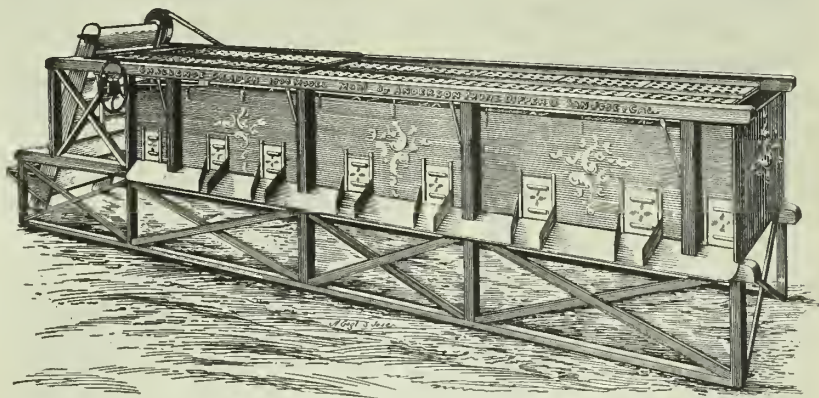
# Prune Growers and Packers, Attention.

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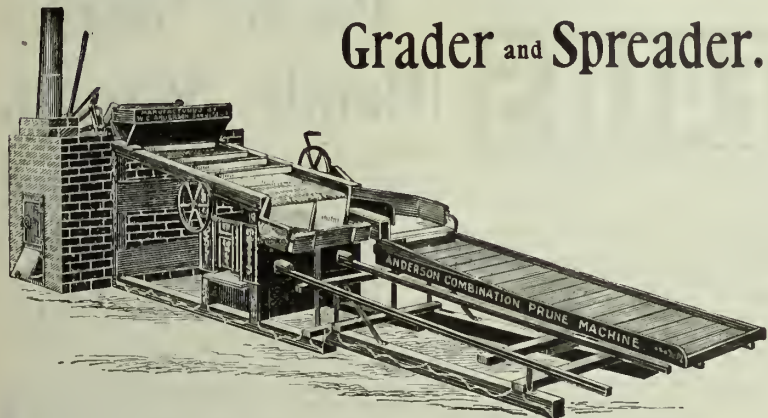
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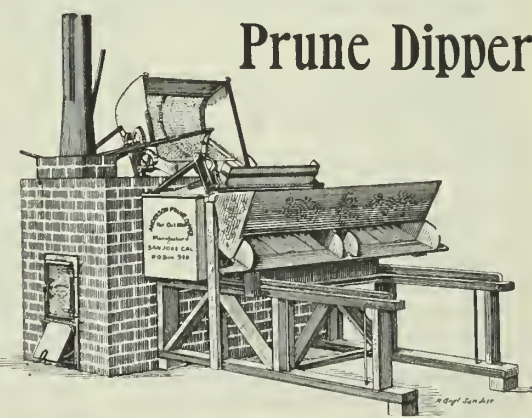
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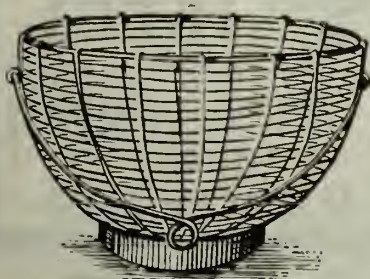


PATENTED OCT. 21, 1890.

SAN JOSE, CAL., April 12, 1900.  
To the Anderson Prune Dipper Co.—In reply to your telephonic inquiry of to day, beg to say that we consider the product of your Combined Dipping and Pricking Machine desirable in every way. We intend adding one or two of your machines to our outfit near Visalia this season.  
Very truly,  
A. C. KUHN & CO.

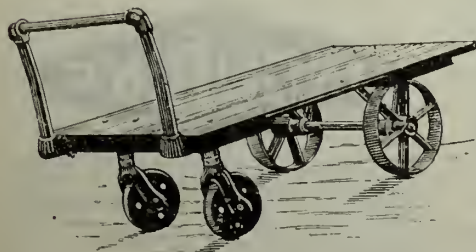
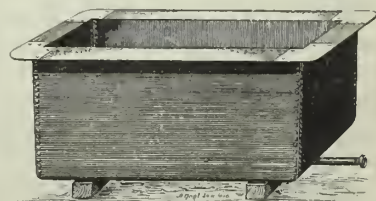
SAN JOSE, CAL., April 23, 1900.  
Anderson Prune Dipper Co., San Jose, Cal.—GENTLEMEN: I purchased from you last year one of your Combined Prune Dippers, Perforators and Graders and used it in my orchard. The results were so satisfactory that I desire to express to you my entire satisfaction of its work.  
Yours truly,  
H. G. BOND.

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Anderson Prune Dipper Co., San Jose, Cal.—GENTLEMEN: The Combination Dipper, Perforator and Grader that we purchased from you for some of our growers is giving perfect satisfaction, and the prunes we handled from those machines last year were the very best quality that we handled.  
Yours very truly,  
THE ALDEN ANDERSON FRUIT CO.

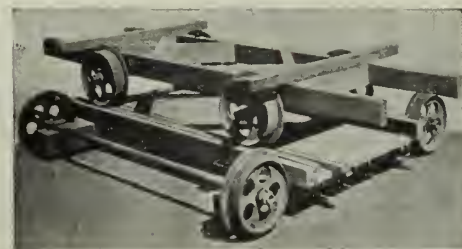


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## THE ORNITHOLOGIST.

### Protection and Importation of Birds.

During the last session of Congress a law was enacted, commonly known as the Lacey Act, which places the preservation, distribution, introduction and restoration of game and other birds under the Department of Agriculture; regulates the importation of foreign birds and animals, prohibiting absolutely the introduction of certain injurious species; and prohibits interstate traffic in birds or game killed in violation of State laws.

The Secretary of Agriculture has placed the Division of Biological Survey of his Department in charge of all matters relating to the preservation and importation of animals or birds under the Act, and Dr. T. S. Palmer, the assistant chief of that division, has immediate charge of the issue of permits for the importation of animals and birds from foreign countries.

The regulations for carrying out the purposes of the Act have just been published by the U. S. Department of Agriculture as Biological Survey Circular No. 29, entitled "Protection and Importation of Birds under Act of Congress Approved May 25, 1900."

The circular explains the object of placing the work in charge of an Executive Department of the Federal Government as being merely to supplement and not to hamper or replace the work hitherto done by State commissions and organizations; in other words, to co-ordinate and direct individual efforts, and thus insure more uniform and more satisfactory results than could otherwise be obtained.

Attention is called to the fact that while the Act provides for the purchase and distribution of birds, no appropriation is made for that purpose. The Department, therefore, has no quail, pheasants or other game birds for distribution.

The Department issues no permits for shipping birds from one State to another. In some States the Board of Fish and Game Commissioners is authorized to issue permits for shipping birds for propagating purposes, and a few States make exceptions in their game laws in the case of birds captured for breeding purposes; but when a State forbids the exportation of birds without exception, interstate commerce in birds from that State is in violation of the Lacey Act, whether the birds are captured during open season or whether they are intended for propagation or not.

Persons contemplating the importation of live animals or birds from abroad must obtain a special permit from the Secretary of Agriculture, and importers are advised to make application for permits in advance, in order to avoid annoyance and delay when shipments reach the custom house. The law applies to single mammals, birds, or reptiles, kept in cages as pets, as well as to large consignments intended for propagation in captivity or otherwise.

Permits are not required for domesticated birds, such as chickens, ducks, geese, guinea fowl, pea fowl, pigeons or canaries; for parrots (including cockatoos, lovebirds, macaws, and parakeets); or for natural history specimens for museums or scientific collections. Permits must be obtained for all wild species of pigeons and ducks.

In the case of ruminants (including deer, elk, moose, antelopes, and also camels and llamas), permits will be issued, as heretofore, in the form prescribed for importation of domesticated animals.

The introduction of the English or European house sparrow, the starling, the fruit bat or flying fox, and the mongoose, known also as the ichneumon or Pharaoh's rat, is absolutely prohibited, and permits for their importation will not be issued under any circumstances.

Under the regulations prescribed by the Secretary of the Treasury, in case of doubt as to whether animals or birds belong to prohibited species, or suspicion on the part of the collector of customs that such species are being entered under other names, the shipment

will be held, at the risk and expense of the importer, pending the receipt of special instructions from the Department of Agriculture, or until examined at the expense of the importer by a special inspector designated by the Secretary of Agriculture and the identity established to the satisfaction of the collector.

Special inspectors will be designated at the ports of New York, Boston, Philadelphia, Baltimore, Washington, New Orleans and San Francisco, who will examine shipments at the request of the owner or agent, or who may be consulted in case of misunderstanding between owners and officers of the customs. These inspectors are to be designated merely for the convenience of importers, and owners or agents are under no obligations to employ them, but the identity of the species must be established to the satisfaction of collectors, and in case of refusal or neglect, or failure to obtain the permit within the specified time, delivery of the property will be refused and immediate exportation required.

The deliberate shipment of starlings or English sparrows from one State to another is now a violation of law and renders the shipper and carrier liable to the penalties provided in the Act.

The attention of sportsmen, commission merchants, shippers and express agents is especially called to the sections which make it unlawful to ship from one State to another animals or birds which have been killed or captured in violation of local laws, and which require all packages containing animals or birds to be plainly marked so that the name and address of the shipper and the nature of the contents may be ascertained by inspection of the outside of such packages.

NATIONS, like individuals, are powerful in the degree that they command the sympathies of their neighbors.

### New Fence Factory.

At Adrian, Michigan, twelve years ago, J. Wallace Page, Charles M. Lamb and Frank E. Harvey, three farmers of Rollin, began making Page Woven Wire Fence in a very modest way. Their factory contained two rickety looms and the office of the humble establishment contained a desk made of an old door, where the bookkeeping was done in a 15-cent manila blotter. People knew the fence was good, but laughed at the idea of those farmers coming to town and making a success of a business venture. However, their experience was the very means of making the kind of fence needed for all kinds of stock.

Success attended the enterprise; the business outgrew the city of its birth, and during last month the company began operations at its new and model factory in Monessen, Pa. In fact, here six industries are contained within one plant, viz., the open-hearth furnace plant, blooming mills, billet mills, rod mills, wire mills and fence factory. Out of the raw material complete galvanized fences are made.

As in the past, it is the purpose of the company to make a good fence rather than a cheap one, and to that end in every "pour" of steel from the furnace the percentage of phosphorus and sulphur is reduced, and that of the carbon raised, until the right proportions are attained to give the steel the proper tensile strength, toughness and springiness to adapt it for use in the Page Coiled Spring Woven Wire Fence. The same attention is given to the manufacture of billets, rods and wire. The annealing and galvanizing processes are entrusted to skilled workmen and care is taken to produce the very best wire and galvanizing possible. Owing to the fact that this fence is part machine and part hand made, requiring skilled labor, it costs more, but the makers believe that the customer is willing to pay for the extra hand labor, provided it is better.

### How's This?

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRAU, Wholesale Druggists, Toledo, O. WALKING, KINMAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Testimonials sent free. Price 75c. per bottle. Sold by all Druggists.

Hall's Family Pills are the best.

### A Few Words

about

## Pain-Killer

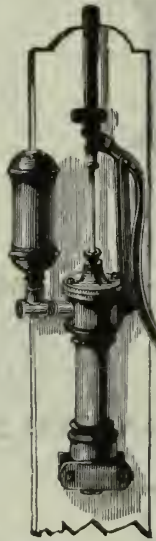
A prominent Montreal clergyman, the Rev. James H. Dixon, Rector St. Jude's and Hon. Canon of Christ Church Cathedral, writes:—"Permit me to send you a few lines to strongly recommend PERRY DAVIS' PAIN-KILLER. I have used it with satisfaction for thirty-five years. It is a preparation which deserves full public confidence."

## Pain-Killer

A sure cure for  
Sore Throat,  
Coughs,  
Chills,  
Cramps, &c.

Two Sizes, 25c. and 50c.

There is only one Pain-Killer, Perry Davis.'



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A Practical Treatise on Raisin Grapes, Their History, Culture and Curing.

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GLENN COUNTY, CALIFORNIA.

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In Subdivisions.

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This property will be ready for sale and rent after July 15th, 1900. The closest personal inspection of the land by proposed purchasers and tenants is invited.

For further particulars, address

F. C. LUSK,

Agent of the Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.



## Pacific Steel Handy Wagon.

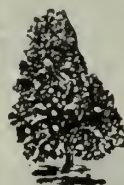
WHEELS.....28 and 34 inches high. TIRES.....4 and 5 in. wide, 1/4 in. thick. AXLES.....1 1/2 inch, solid steel. BOLSTERS AND AXLE STOCKS...White oak. CAPACITY.....Guaranteed 5000 lbs.

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Every Horticulturist Should Have my 28-paged, sumptuously illustrated catalogue, which tells all about



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The old sorts and the tested new sorts; also tables for planting trees, sowing seed, etc.

REMEMBER, I send this valuable book FREE!

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Fireproof and Waterproof. Costs only a fraction of price of Oil Paint. Waterproof Indurine is designed for inside or outside use on plastered walls, wood or brick. Inside Indurine is for inside work only and works over old whitewash or kalsomine. White and colors.

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### Cream Separators.

If an agent for a competing separator condemns the Sharples, don't you believe it. He is telling you for his good, not yours. It's the way of the world. He is afraid you will try it. Just disappoint him. a trial is free.



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P. M. SHARPLES,  
West Chester, Pa.

THE SHARPLES CO.,  
28 So. Canal St., Chicago, Ill.

### What the State Fair Can Do.

We do not need to call attention to the fact that we are going to have a State fair in New York this fall. That is done with quite sufficient force in another column. But as the season for such fairs approaches, it seems worth while to ask in a few sentences what their true objects are, what good they do us as farmers, or may do us if they and we live up to our best selves in giving and receiving. To spread better information is the obvious answer. But when the expense of holding such large exhibitions as the State fairs is taken into account, many persons who heartily believe in improving agricultural methods are tempted to think that this work may safely be left to the other very capable agencies—the press, the institutes, the experiment stations—whose efforts are being bent, with greater energy and thoroughness than ever before, along this line.

We believe, however, that the fairs, and especially the State fairs, have a peculiar field which none of these other agencies of agricultural improvement can fill, in the simple fact that they provide a sort of a competitive examination in growing vegetables, fruit and flowers, in preparing dairy products, in breeding horses, cattle, sheep, swine and poultry—through which one may learn by experimental successes and failures in a few days what it would take years to acquire in the ordinary process of buying and selling. Experience is, of course, the best teacher of agriculture as of everything else, and the fairs in this respect imitate her method closely—and their teaching is not nearly so expensive. The unfit pat of butter or plate of apples or dairy cow is weeded out with magical swiftness by a competent judge, and we don't have to wait till the end of the year and do a lot of bookkeeping to discover that we might have done better. One who enters a competition may learn even more by failure than by success. There is nothing in the world so convincing as being brought face to face with a real object, and then being knocked on the head. It isn't merely the judge's say-so; it's the irrevocable verdict of one's own senses. You see where those other cows are better than yours; you can taste a finer flavor in that butter. There is no escaping such evidence.

Or perhaps you have reached the point where fine distinctions count, and the better is separated from the worse by a mere hair's breadth. Here the judge has a delicate responsibility, and everything depends on his enlightenment. But assuming that he is enlightened, that he knows on which side of the hair the true choice lies, what lessons can one such competition teach! For the judge should deal in ideal standards, and should inform us by his decisions not simply how to "catch" the market but how to transcend it, how to pass

into that still air where prices never fall, because the demand is always greater than the supply. This is the supreme lesson.

What has been said of the exhibitor applies, though of course in a less degree, to the spectator—if he keeps his eyes open. And this is especially true of State fairs, where the exhibits come from a wider range of territory than do those at smaller fairs, and show, or ought to show, the best the State can do. Every progressive State ought to have its fair, and ought to resolve, as has been resolved in New York this year, to make that fair of actual value to every farmer who visits it—to have the best judges the country affords, to be liberal in the distribution of premiums and wise in placing them, to furnish to exhibitors and spectators the utmost facilities, in short to make it, what every State fair should be, one of the most potent agencies conceivable for the uplifting of the farmer's calling and life.—Country Gentleman.

### To Test American Seeds.

The charge that American clover seed is inferior to European is a serious one, inasmuch as it is made by the greater number of workers in the seed-control stations. There are, however, notable exceptions. Dr. Nobbe of Tharand has always maintained that American seed was of good quality, and in a recent issue of the Deutsche Landwirtschaftliche Presse Dr. Kirchner, who had previously maintained that American clover was inferior, gives the results of tests that clearly show the American product to be better than the European. The explanation of these conflicting reports is doubtless that the American seeds used in these tests did not all come from the same part of the United States and were of varying quality.

Experiments are now being carried on under the direction of the Secretary of Agriculture to determine the relative value in the United States of clover seed of European and American origin, and these will probably be followed by extensive tests to determine the value of seeds produced in different sections of the United States.

In every town and village may be had, the

## Mica Axle Grease

that makes your horses glad.

Made by Standard Oil Co.

PAGE

## THE EXTRA COST

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## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, July 25, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Aug.	Sept.
Wednesday.....	76½@76¼	77½@76¾
Thursday.....	74 @76½	75 @77½
Friday.....	75½@77¼	76¾@78¼
Saturday.....	77 @77½	77¾@78¾
Monday.....	76¾@75¾	78¾@76¾
Tuesday.....	75¼@74¼	76¾@75¾

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	Sept.	Dec.
Wednesday.....	6s 1¼d	6s 2¼d
Thursday.....	6s 1 d	6s 1¼d
Friday.....	6s 1¼d	6s 1¼d
Saturday.....	6s 1¼d	6s 2¼d
Monday.....	6s 1¼d	6s 2¼d
Tuesday.....	6s 1 d	6s 1¼d

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec., 1900.	May, 1901.
Thursday.....	1 12½@1 13¼	— @ —
Friday.....	1 13¼@1 13½	— @ —
Saturday.....	1 14¼@1 15	— @ —
Monday.....	1 13¼@1 14¼	— @ —
Tuesday.....	1 13¼@1 13½	— @ —
Wednesday.....	1 12½@1 13½	— @ —

## WHEAT.

Although the wheat market during preceding week was in a great measure at the mercy of the buying or bear interest, it did not long remain in that condition. Speculative values have since recovered appreciably, and the spot or sample market showed an improved tone, the change for the better being occasioned by excessively hot weather doing serious damage to the wheat in a considerable portion of England, France and Germany. Foreign buyers immediately took hold freely of American wheat, it being not only the cheapest obtainable, but about the only description urged to sale in large quantities. There was practically no Argentine wheat offering for the time being, and asking figures for Russian and Danubian wheat were sharply advanced, these countries and North America forming the main outside sources of supply for Great Britain and Western Europe. The crop in this State is not proving as heavy as many anticipated. Ships remain in light supply, however, and ocean freights close to 37s 6d per long ton for wheat from this port to Europe, above being figure on last reported spot charter, indicating a decline of 2s 6d from previous rate. During the past few days the market has been again sagging, but spot values remained fairly steady.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, \$1.15@1.12½.  
May, 1901, delivery, \$—@—c.  
Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at \$1.12½@1.13½; May, 1901, —@—.

California Milling.....\$1 10 @1 15  
Cal. No. 1 shipping, alongside.....1 06¼@1 07¼  
Oregon Valley.....1 05 @1 07¼  
Washington Blue Stem.....1 07¼@1 12¼  
Washington Club.....1 02¼@1 07¼  
Off qualities wheat.....1 00 @1 02¼

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-1900.	1900-01.
Liv. quotations.....	6s0d@6s0¼d	6s1¼d@6s2¼d
Freight rates.....	32@—s	37¼@40s
Local market.....	\$1 05@1 07½	\$1 06¼@1 08½

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

This market is in much the same groove as noted a week ago, values not being well sustained at the advance established the latter part of June. The general tone, however, was slightly better than for a fortnight preceding. Spot stocks are not heavy, but with the recent very slow demand, they have proven too large for immediate requirements. The amount of flour now going outward is hardly up to the average.

Superfine, lower grades.....	\$2 25@2 50
Superfine, good to choice.....	2 60@2 80
Country grades, extras.....	3 15@3 40
Choice and extra choice.....	3 40@3 65
Fancy brands, jobbing.....	3 60@3 75
Oregon, Bakers' extra.....	2 90@3 25
Washington, Bakers' extra.....	2 90@3 40

## BARLEY.

There was a sharp recovery in speculative values for this cereal the past week,

accompanied by a corresponding advance in asking figures in the sample market. There has been lately a fairly active shipping demand for bright and clean barley, and a moderate inquiry on local account for feed descriptions as well as for brewing grades. Returns from the threshers indicate a lighter yield than was generally anticipated.

Feed, No. 1 to choice.....	72¼@ 75
Feed, fair to good.....	67¼@ 70
Brewing, No. 1 to choice.....	80 @ 87½
Chevalier, No. 1 to choice.....	— @ —
Chevalier, No. 2.....	— @ —

## OATS.

While market has not changed materially since date of last report, it is certainly no more favorable to buyers than when last quoted. New crop California oats are arriving rather freely, but there are no receipts of consequence at present from any outside source. Immediate offerings are largely common to medium grades. Choice to fancy oats, either for feed or milling purposes, are in very light stock.

White Oats, fancy feed.....	1 22¼@1 25
White, good to choice.....	1 12¼@1 20
White, poor to fair.....	1 05 @1 10
Gray, common to choice.....	1 05 @1 12½
Milling.....	1 25 @1 35
Surprise, good to choice.....	1 25 @1 35
Black Russian.....	1 00 @1 10
Red.....	1 00 @1 15

## CORN.

Market shows decided strength, more particularly for Large White and Small Yellow, and is not likely to be soon any more favorable to buyers than at present. Supplies at this point are of very moderate proportions and are almost wholly local product, Eastern corn being relatively higher at primary points than in this center.

Large White, good to choice.....	1 17¼@1 20
Large Yellow.....	1 15 @1 17½
Small Yellow.....	1 40 @1 50
Eastern, in bulk (carload lots).....	1 16 @1 18

## RYE.

Inquiry is not particularly brisk, but offerings are rather light. Values show steadiness.

Good to choice, new.....	92¼@ 97½
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## BUCKWHEAT.

Aside from very small supplies in the hands of millers, the market is bare. Quotations remain nominally as last noted.

Good to choice.....	2 00 @2 10
Sliverskin.....	— @ —

## BEANS.

There has been some disposition shown to shade prices on Lady Washingtons, Bayos and Pinks, in favor of buyers, but more particularly has market been easy for the first two varieties named. Holders are anxious to effect a clean-up before new crop comes upon the market. For Limas the market has also presented a slightly easier tone, for same reason above noted. Stocks of other kinds are too light to admit of any noteworthy business or to give owners uneasiness.

Pea, fair to good, 100 lbs.....	3 40 @3 50
Small White, good to choice.....	3 35 @3 45
Lady Washington.....	2 75 @2 90
Butter, small.....	— @ —
Butter, large.....	— @ —
Pinks.....	2 70 @2 90
Bayos, good to choice.....	2 65 @2 75
Reds.....	3 25 @3 75
Red Kidneys.....	— @ —
Limas, good to choice.....	5 25 @5 35
Black-eye Beans.....	3 25 @3 75
Horse Beans.....	2 25 @2 50
Garbanzos, large.....	2 50 @2 75
Garbanzos, small.....	2 00 @2 25

Recent advices by mail from New York give the following report of the bean market, prices quoted being per 60-lb. bushel:

Under the influence of continued dull trading on both home and foreign account, advices of showery in the bean producing sections and consequent better prospects for the crop, and some pressure to move more of the stock that has previously accumulated here, values have been further reduced on nearly all kinds. The stock of State beans is not so burdensome, but there are a good many foreign still unsold, and the lower prices at which these are offering affects the market for domestic. Marrow had a few sales early in the week at \$2.17½ for fancy large, but the price soon settled to \$2.15, and average choice lots have been offering for some days past at \$2.12½. No one has seemed to want Medium and the best barrel stock is now seeking custom at \$2.05, with prime bags offering at \$2. The relatively light supply of Pea has helped to sustain the market for these, but there has been dull trading in them, and our outside quotations are extreme. Red Kidney fell to \$2.10 at which most of the business of the week was done; they are closing weak. So few White Kidney available that the feeling is quite firm. Yellow Eye have had some eastern demand. Turtle Soup greatly neglected and nominal; effort to

realize on round lots would necessitate the acceptance of very low prices. Lima steady. Holders of foreign beans have been anxious to sell and lower figures have been named on all grades; outside quotations are extreme for the finest qualities. Green and Scotch peas slow and weaker.

## DRIED PEAS.

Scarcely anything doing in this article, offerings being insignificant and there is little or no inquiry at present.

Green Peas, California.....	2 40 @2 50
Niles Peas.....	2 15 @2 25

## WOOL.

Buyers are still keeping in the background, and nothing to indicate when they will come to the front. The impression prevails, however, that it will not be many weeks before some relief will be experienced from the long pending dullness. It is believed that when activity is resumed it will be at no lower figures than below noted.

## SPRING.

Humboldt and Mendocino.....	16 @18
Northern, free.....	14 @16
Northern, defective.....	11 @13
Middle Counties, free.....	14 @16
Middle Counties, defective.....	11 @13
Southern Mountain, 12 mos.....	8 @10
Southern Mountain, free, 7 mos.....	9 @11
Southern Mountain, defective, 7 mos.....	8 @10
Oregon Valley, fine.....	17 @19
Oregon Valley, coarse to medium.....	16 @17
Eastern Oregon, choice.....	15 @16
Eastern Oregon, fair to good.....	11 @14
Nevada, as to condition.....	14 @16
San Joaquin Fall Lambs.....	8 @9

## HOPS.

There are few old hops now remaining and none of desirable quality. For choice to select hops of coming crop there is fair inquiry, dealers being willing to contract at about same figures as have been for some time past current on old. A firmer market has been lately reported abroad, and if the same continues, it may cause a more profitable range of values for growers to be established in this center.

Good to choice, 1899 crop..... 7 @10

The following review of hop market is furnished through mail of recent date and is from a New York authority:

Analyzing the week's receipts we find that 150 bales, presumably State hops, came to a brewer direct, about 50 bales of State were received by dealers, and the balance of the arrivals were from the Pacific coast, 430 bales of which were for export. A little more business has been accomplished on the local market this week, and the position has become somewhat firmer on all but very low grade Oregon hops, which do not seem to be wanted at all. Strictly choice State have had sales to brewers at 13½@14c, and could not be bought on the open market for less; inferior to prime grades are selling in range of 10@13c, but the stock of all kinds of States is small. The choicest Pacific coast lots are worth about as much as best State but lower sorts are neglected and some poor stock is available at 7@8c. Advices from California point to a lighter crop there than last year, about the same in Washington, and some shortage in Oregon. In New York State the yield will undoubtedly be considerably less. Otsego and Schoharie counties had a very severe storm two weeks ago, and it did considerable damage to the vines. This week there have been showers in many sections which have been helpful to the yards. Mail advices report a serious attack of aphids throughout the English plantations and growers have resorted to spraying with sulphur. In Germany the crop is improving under more favorable weather conditions.

## HAY AND STRAW.

The advanced figures last quoted for hay resulted in materially increased offerings the past week, the demand hardly keeping pace with the increased supply, and the new figures were not well sustained, especially for other than most select qualities. That there will be any material weakening in values, however, is not at all probable.

Wheat.....	8 00@12 00
Wheat and Oat.....	7 50@11 00
Oat.....	7 00@10 00
Barley.....	5 50@8 00
Volunteer.....	4 50@6 50
Alfalfa.....	6 0 @7 50
Stock.....	5 00@6 50
Compressed.....	8 00@12 00
Straw, ¾ bale.....	25 @37½

## MILLSTUFFS.

Bran was in fairly liberal supply, as compared with the demand, and market was easy without being quotably lower. Market for other mill feed quoted herewith ruled quiet at generally unchanged rates.

Bran, ¾ ton.....	12 00@13 00
Middlings.....	15 00@18 00
Shorts Oregon.....	13 00@15 00
Barley, Rolled.....	15 50@16 00
Cornmeal.....	25 00@25 50
Cracked Corn.....	26 50@27 00

## SEEDS.

Nothing of consequence doing in this line, nor is there likely to be any business worth noting until new crop Mustard puts in an appearance in quotable quantity, which should be in a few weeks. Values remain nominally as previously noted.

	Per ctt.
Mustard, Trieste.....	— @ —
Mustard, Yellow.....	— @ —
Flax.....	— @ —
	Per lb.
Canary.....	3¼ @ 4
Rape.....	2 @ 3
Hemp.....	3¼ @ 4
Timothy.....	— @ —
Alfalfa, Utah.....	— @ —

## BAGS AND BAGGING.

Aside from a moderate amount of trading in Fruit Sacks at steady prices, there is little doing at present in this department. Grain Bag market is decidedly quiet and is weak at the quotations.

Calcutta Grain Bags, buyer June-July.....	— @ —
Calcutta Grain Bags, spot.....	6¼ @ —
San Francisco Grain Bags, 22x36, spot.....	6¼ @ —
State Prison Bags in lots of 2000, ¾ 100.....	5 65 @ —
Wool Sacks, 4 lbs.....	— @3½
Wool Sacks, 3½ lbs.....	— @28¼
Fleece Twine.....	7¼ @ —
Gunnies.....	— @12½
Bean Bags.....	4½ @ 5¼
Fruit Sacks, cotton.....	6¼ @ 7¼

## HIDES, PELTS AND TALLOW.

There is no improvement to note, the market being quiet throughout and lacking in firmness. About the best that can be hoped for in the near future is that existing values be sustained.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	9½	8¾
Medium Steers, 48 to 56 lbs.....	8¾	7¾
Light Steers, under 48 lbs.....	8¾	7¾
Heavy Cow Hides, over 50 lbs.....	8½	7¾
Light Cow Hides, under 50 lbs.....	8¾	7¾
Wet Salted Klp.....	8¾	7¾
Wet Salted Veal.....	8¾	7¾
Wet Salted Calf.....	9	8
Dry Hides.....	15	12
Dry Klp and Veal, 11 to 16 lbs.....	15	12
Dry Calf, under 4 lbs.....	15	12
Salted Horse Hides, large.....	2 00	@ —
Salted Horse Hides, medium.....	1 50	@ —
Salted Horse Hides, small.....	1 00	@ —
Dry Horse Hides, large.....	1 50	@ —
Dry Horse Hides, small.....	75	@ 1 00
Dry Colts' Hides.....	50	@ —
Pelts, long wool, ¾ skin.....	1 00	@ 1 25
Pelts, medium, ¾ skin.....	70	@ 90
Pelts, short wool, ¾ skin.....	35	@ 60
Pelts, shearling, ¾ skin.....	20	@ 35
Deer Skins, best summer.....	27½	@ 30
Deer Skins, good medium.....	20	@ 22½
Deer Skins, thin winter.....	—	@ 10
Elk Hides.....	10	@ 12
Tallow, good quality.....	4	@ —
Tallow, No. 2.....	3	@ 3½
Goat Skins, perfect.....	30	@ 37½
Goat Skins, damaged.....	10	@ 20
Kid Skins.....	5	@ 10

## HONEY.

The amount of honey on the market is not large, but of Amber grades, which constitute the bulk of present offerings, there is enough for the immediate demand at existing rates. Water White continues scarce and in a moderate way is salable at comparatively stiff figures. A lot of 303 cases, mostly Light Amber Extracted, arrived this week from the Hawaiian Islands.

Extracted, White Liquid.....	7¼ @ 7½
Extracted, Light Amber.....	6½ @ 7¼
Extracted, Amber.....	5¼ @ 6
White Comb, 1b frames.....	12 @12½
Amber Comb.....	9 @11
Dark Comb.....	8¼ @ 7¼

## BEESWAX.

There is no trouble in securing custom for desirable qualities at prevailing rates. Stocks are small. Inquiry is largely on foreign account.

Good to choice, light, ¾ lb.....	26 @27
Dark.....	24 @25

## LIVE STOCK AND MEATS.

While Beef is not arriving in large quantity, there is enough for the immediate demand. Market for Large Veal continued to incline in favor of consumers, while of Small Veal there was hardly enough arriving to warrant quotations. Prices for Mutton and Lamb ruled about as last quoted, market being moderately firm. Hog market was steady; local grain-fed product is arriving rather freely.

Beef, first quality, dressed, net ¾ lb.....	6 @ —
Beef, second quality.....	5¼ @ 6
Beef, third quality.....	5 @ 5¼
Mutton—ewes, 7@7½c; wethers.....	7¼ @ 8
Hogs, hard grain fed, medium.....	5½ @ 6
Hogs, small, fat.....	5½ @ 6
Hogs, large, hard.....	5¼ @ —
Hogs, acorn-fed.....	— @ —
Hogs, feeders.....	5¼ @ 5½
Hogs, country dressed.....	6 @ 6¼
Veal, small, ¾ lb.....	8 @10
Veal, large, ¾ lb.....	8 @ 8½
Lamb, spring, ¾ lb.....	8¼ @ —



## POULTRY.

Market was not burdened with offerings of choice poultry, large and fat, but there was entirely too much common old and small young for a healthy state of trade for these descriptions. Large and fat fowls did not lack for custom and brought in some instances more than quotations. It sometimes happens, however, that what shippers designate as large and fat stock will not pass for such when offered to poultrymen in this market.

Turkeys, dressed, # lb.	— @ —
Turkeys, live hens, # lb.	10 @ 11
Turkeys, live gobblers, # lb.	9 @ 10
Hens, California, # dozen	3 50 @ 5 00
Roosters, old, # dozen	3 50 @ 4 00
Roosters, young (full-grown), # dozen	3 50 @ 5 00
Fryers, # dozen	3 00 @ 3 50
Broilers, large, # dozen	2 50 @ 3 00
Broilers, small, # dozen	1 75 @ 2 00
Ducks, old, # dozen	3 00 @ 4 00
Ducks, young, # dozen	3 00 @ 4 00
Geese, # pair	1 12 1/2 @ 1 25
Goslings, # pair	1 25 @ 1 50
Pigeons, old, # dozen	1 25 @ 1 50
Pigeons, young, # dozen	1 25 @ 1 50

## BUTTER.

Choice to select qualities of fresh continue in limited stock, as is to be expected at this date, and market for above kinds is firm, quotable rates showing an advance over preceding week. Lower grades of both creamery and dairy move slowly at rather low figures.

Creamery, extras, # lb.	20 @ 21
Creamery, firsts, # lb.	19 @ 20
Creamery, seconds, # lb.	18 @ 19
Dairy, select, # lb.	18 @ 19
Dairy, seconds, # lb.	17 @ 18
Dairy, soft and weedy, # lb.	— @ —
Mixed store, # lb.	15 @ 16
Creamery in tubs, # lb.	19 @ 21
Pickled Roll, # lb.	18 @ 20
Firkin, California, choice to select, # lb.	19 @ 21
Firkin, common to fair, # lb.	17 @ 18

## CHEESE.

Stocks of domestic are tolerably heavy, with demand not very brisk, especially in a wholesale way, at prevailing rates. There is no disposition to crowd cheese to sale, however, at the expense of making marked concessions to buyers. Eastern product is in light supply.

California, fancy flat, new, # lb.	9 1/2 @ —
California, good to choice, # lb.	8 1/2 @ 9
California, fair to good, # lb.	8 @ 8 1/2
California Cheddar, # lb.	— @ —
California, "Young Americas", # lb.	9 1/2 @ 10 1/2

## EGGS.

Not many strictly choice eggs are arriving from any quarter, but with demand only moderate, there is about enough for immediate needs. Prices remained close to figures of previous week, a few eggs of superior quality selling above quotations. Cold storage eggs, both domestic and Eastern, are being offered freely and at comparatively easy figures.

California, select, large, white and fresh, # dozen	21 @ 22
California, select, irregular color & size, # dozen	18 @ 20
California, good to choice store, # dozen	15 @ 16
Eastern, as to section and grading, # dozen	15 @ 17 1/2
Eastern, cold storage, # dozen	— @ —

## VEGETABLES.

A few kinds were in reduced receipt and higher, notably Peas and String Beans, but for most vegetables the market inclined to weakness. Tomatoes and Squash especially were in liberal receipt and went as a rule at low figures. Onion market was weak at last quoted rates, offerings showing increase, while demand did not correspondingly improve.

Asparagus, # box	— @ —
Beans, String, # lb.	3 @ 4
Beans, Wax, # lb.	4 @ 5
Beans, Lima, # lb.	3 @ 4
Cabbage, choice garden, # 100	50 @ —
Cauliflower, # dozen	50 @ —
Cucumbers, Bay, # box	25 @ 40
Egg Plant, # box	75 @ 1 25
Garlic, # lb.	2 1/2 @ 3
Green Corn, # sack	50 @ 1 00
Green Corn, Alameda, # crate	1 25 @ 1 50
Onions, Red, Cal., good to choice, # 100	40 @ 50
Onions, Yellow Danver, # cental	90 @ 1 00
Okra, Green, # box	75 @ 1 00
Peas, Sweet, garden, # lb.	3 1/2 @ 4
Peas, Green, # sack	— @ —
Peppers, Green Chile, # box	40 @ 75
Peppers, Bell, # lb.	40 @ 75
Rhubarb, # box	— @ —
Squash, Summer, # large box	40 @ 50
Tomatoes, # small box	— @ —
Tomatoes, River, # large box	50 @ 1 00

## POTATOES.

Seldom has there been a much more unsatisfactory market for potatoes than during the past few weeks. With only moderate local demand and very light inquiry for shipment, values have been at a very low range, in some instances prices realized being barely sufficient to cover freight charges and incidental expenses of marketing. On the other hand, some of uniform and desirable size were taken by special local trade at higher rates than were justified as quotations.

Burbanks, River, # cental	30 @ 70
New Potatoes, # cental	30 @ 70

## The Fruit Market.

## FRESH FRUITS.

While there was much fruit of choice quality on market, there was a great deal more of common and inferior descriptions. Particularly was this the case as regards Pears. There was a glut of wormy and windfall Bartletts, most buyers refusing them at any figure, while strictly choice Bartletts, large and sound, were in light receipt and hard to secure in wholesale quantity. Fine Bartletts were more readily salable at \$25 per ton than were fair quality at half the figure. Apricots were in decreased receipt, and where not otherwise faulty, were mostly over-ripe; choice brought about as good figures as had been previously ruling. Peaches continued in heavy supply and averaged well as to quality, but market ruled weak. Cannons named \$12.50@17.50 per ton for good to choice Crawfords. Apple market was quiet, although choice were not plentiful and brought fairly good prices. Plums and Prunes went at fully as low figures as preceding week, the former being in heavy supply. Nectarines were not in large receipt. Figs were in light stock and market was against buyers, the first crop being about all in. Grapes are coming forward more freely, and quality is improving, but not the price. Tendency of the market for melons of all descriptions was in favor of the consumer. Berries in season went at generally unchanged and in the main at low figures, demand for most kinds not being urgent.

Apples, fancy, 4-tier box, # 50-lb box	1 00 @ 1 25
Apples, good to choice, # 50-lb box	75 @ 1 00
Apples, common to fair, # 50-lb box	40 @ 60
Apples, Crab, # box	30 @ 50
Apricots, Royal, # crate	30 @ 50
Apricots, Royal, # box	25 @ 40
Apricots, Royal, # ton	10 00 @ 17 50
Blackberries, # chest	2 00 @ 3 50
Cantaloupes, # crate	2 00 @ 3 00
Currents, Red, # chest	2 50 @ 3 50
Grapes, Seedless Sultana, # crate	1 00 @ 1 25
Grapes, Fontainebleau, # crate	40 @ 60
Grapes, Rose of Peru, # crate	90 @ 1 25
Raspberries, # chest	4 00 @ 7 00
Nectarines, Red, # box	50 @ 75
Nectarines, White, # box	40 @ 65
Nutmeg Melons, # crate	1 00 @ 1 75
Plums, ordinary varieties, # box	25 @ 40
Plums, fancy, # box	50 @ 65
Prunes, # crate	25 @ 50
Peaches, # box	25 @ 50
Peaches, wrapped, # box	40 @ 65
Pears, Bartlett, # box	40 @ 1 00
Pears, common kinds, # box	25 @ 65
Figs, Black, # double layers	75 @ 1 25
Figs, single layer box	35 @ 60
Strawberries, Longworth, # chest	2 50 @ 5 00
Strawberries, Large, # chest	2 50 @ 4 00
Whortleberries, # lb.	5 @ 7
Watermelons, # 100	8 00 @ 18 00

## DRIED FRUITS.

The free movement previously noted in Apricots continues, but beyond this there is no evidence of special activity in cured or evaporated fruits. Peaches have not yet received much attention, neither have Nectarines nor Pitted Plums, although these varieties are beginning to be offered by sample in wholesale quantities. Buyers name 5c for fair average qualities of both Peaches and Nectarines, with choice to select salable at the customary advance over the price of average offerings. While values for Pitted Plums are not yet well defined, the range will likely be 5 1/2@7c, the lower figure for fairly good Black and the latter figure a quotable extreme for select White and Red. Apricots of the Royal variety are going at a range of 5 1/2@7c, with most of the business at 6@6 1/2c, and the bulk of offerings under choice. Moorpark are scarce and are quotable at 7@7 1/2c for prime and 8@9c for choice to select. New Pears are expected on market in sufficient quantity to enable giving quotations for them the coming week. Prunes of last year's crop are in light stock, and market firm at the quotations, 40-50's being about the only size now obtainable and not many of these offering. No announcement of prices for new Prunes has yet been made.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime, # 5-lb box	5 1/2 @ —
Apricots, Royal, choice, in sacks, # lb.	6 1/2 @ 7
Apricots, Royal, fancy, # lb.	— @ —
Apricots, Moorpark, # lb.	— @ —
Apples, in 50-lb boxes, rings, pressed, fancy, # 5-lb box	5 1/4 @ 5 1/2
Apples, 50-lb boxes, rings, pressed, good to choice, # 5-lb box	4 @ 4 1/2
Figs, White, fancy pressed, # 5-lb box	5 1/2 @ 5 1/2
Nectarines, # lb.	5 @ 5 1/2
Peaches, unpeeled, fancy, # 5-lb box	6 1/2 @ 7 1/2
Peaches, unpeeled, choice, # 5-lb box	5 @ 5 1/2
Peaches, peeled, in boxes, # 5-lb box	12 @ 15
Pears, unpeeled Bartletts, halved, fancy, # 5-lb box	9 @ 9 1/2
Pears, halved, unpeeled Bartletts, # 5-lb box	6 1/2 @ 7 1/2
Pears, quartered, unpeeled Bartletts, # 5-lb box	6 1/2 @ 7 1/2
Plums, Black, pitted, # 5-lb box	5 1/2 @ 6
Plums, White and Red, # 5-lb box	6 1/2 @ —
Prunes, in sacks, 40-50s, # 5-lb box	4 1/4 @ 4 1/2
50-60s, # 5-lb box	— @ —
60-70s, # 5-lb box	— @ —
70-80s, # 5-lb box	— @ —
Prunes in boxes, 1/4 higher for 25-lb boxes, 1/4 higher for 50-lb boxes, # 5-lb box	— @ —
Prunes, Silver, # 5-lb box	4 1/4 @ 6
COMMON SUN-DRIED.	
Apples, sliced, # 3 @ 3 1/2	

Apples, quartered, # 3 1/2 @ 4 1/2	
Figs, Black, # 2 @ 3	
Figs, White, # 3 @ 3 1/2	
Peaches, unpeeled, # 4 @ 4 1/2	

Advices by recent mail from New York furnish the following review of the dried fruit market in the East.

The market for evaporated apples has continued very quiet with prices low and favoring buyers; prime are not exceeding 5c and our outside quotations on choice and fancy are exceptional. Favorable crop reports, both here and abroad, cause little interest to be shown in futures and prime wood-dried are offering for October, November and December delivery at 5c without attracting attention. Sun-dried apples have shared in the general dullness, and demand for chops and waste has also been very limited; latter largely defective and top prices extreme. Old raspberries pretty well cleaned up. A few new cherries have appeared but opening values hardly established as yet. Some new California apricots arriving and selling mainly at 8 1/2c; few old left. No new peaches as yet and old stock is working out slowly at about former prices. Prunes have had a better demand with sales generally at 5 1/2@6c for 40s., 5 1/2@5 1/2c for 50s., 5@5 1/2c for 60s. and down to 4 1/2c for 90s., there are a few 60s. and hardly any 70s. or 80s. available.

Apricots, Cal., new, # lb.	8 1/4 @ 8 1/2
P. aches, Cal., unpeeled, in bxs, # lb.	7 @ 8
Peaches, Cal., unpeeled, in bags, # lb.	6 @ 7 1/2
Prunes, Cal., # lb.	4 1/4 @ 6 1/2

## RAISINS.

There have been no new developments reported. Market for old stock is stagnant, and it is a "go as you please" as regards prices for the odds and ends remaining in second hands. Rates for early deliveries of new crop have not so far been made public.

## CITRUS FRUITS.

Orange market is quiet and lacks firmness, and that there will be any improvement during balance of the season is not probable. Lemons are in reduced stock and market is quotably higher, the recent warm weather having been quite favorable for the sale of this fruit. Limes have further advanced, with rather light supplies and a fairly active demand.

Oranges—Navel, fancy # box	— @ —
Navels, good to choice, # 17 1/2 @ 2 25	
Navels, common to fair, # lb.	— @ —
Valencias, # lb.	1 50 @ 2 75
St. Michaels, # lb.	1 50 @ 2 50
Mediterranean Sweet, # lb.	1 50 @ 2 25
California Seedlings, # lb.	— @ —
Lemons—California, select, # box	3 50 @ 4 00
California, good to choice, # lb.	3 00 @ 3 50
California, common to fair, # lb.	1 50 @ 2 50
Limes—Mexican, # box	6 00 @ 6 50
California, small box, # lb.	— @ —

## NUTS.

The Almond market shows a firm tone. Most of this year's crop, now estimated at about 2,500 tons, was contracted for at 9@10c. for the Hatch varieties, with market higher at this date. Select Non Pareils are not now obtainable under 12 1/2c. No new business reported in new crop Walnuts; 9@10c. asked for soft shell. Peanut market continues steady, with stocks light.

California Almonds, shelled, # lb.	15 @ 20
California Almonds, paper shell, # lb.	11 1/2 @ 12 1/2
California Almonds, soft shell, # lb.	9 1/2 @ 10 1/2
California Almonds, hard shell, # lb.	6 @ 7
Walnuts, White, soft shell, # lb.	9 @ 11
Walnuts, White, California, standard, # lb.	7 1/2 @ 9
Chestnuts, California Italian, # lb.	8 @ 10
Peanuts, California, fair to prime, # lb.	5 @ 6
Peanuts, Eastern, hand-picked, # lb.	6 @ 6 1/2
Pine Nuts, # lb.	5 @ 6

## WINE.

The market shows no change, being exceedingly quiet at last quoted range, 14@16c per gallon wholesale for dry wines of last year's vintage, and 17@20c in a small way, extreme figures being for high grade or selected stock. There is very little wine now offering from producers. Receipts of wine at this port in June were 1,279,375 gallons, as against 1,193,687 gallons for corresponding month in 1899, showing an increase of 80,688 gallons.

## California Dried Fruit at New York.

NEW YORK, July 25.—Evaporated apples, common, 4 1/2@5c; prime wire tray, 5 1/4@5 1/2c; choice, 5 1/2@6 1/2c; fancy, 7@7 1/2c. California dried fruits.—Market dull and prices not well defined. Prunes, 3 1/2@7c. Apricots, Royal, 11@14c; Moorpark, 15@17c. Peaches, unpeeled, 6@9c; peeled, 14@18c.

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## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, 1/4 sacks.....	123,301	371,515
Wheat, centals.....	147,244	338,260
Barley, centals.....	51,545	183,346
Oats, centals.....	16,805	40,378
Corn, centals.....	1,893	2,152
Rye, centals.....	1,600	3,405
Beans, sacks.....	3,111	5,791
Potatoes, sacks.....	29,218	66,430
Onions, sacks.....	2,807	7,655
Hay, tons.....	5,144	10,588
Wool, bales.....	850	1,984
Hops, bales.....	1	373

## EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, 1/4 sacks.....	47,884	215,164
Wheat, centals.....	134,085	303,226
Barley, centals.....	662	2,510
Oats, centals.....	—	418
Corn, centals.....	223	805
Beans, sacks.....	55	155
Hay, bales.....	—	180,090
Wool, pounds.....	35	6,882
Hops, pounds.....	10	55
Honey, cases.....	442	1,323
Potatoes, packages	—	3,438

## Schmidt Milk Fever Treatment.

This is a comparatively new treatment for milk fever, which was mentioned last year in the PACIFIC RURAL PRESS. It is called the Schmidt treatment, and out of 412 cases treated by European veterinarians 90% are said to have made a complete recovery, and practically the same proportion of recoveries are reported as the result of the use of the treatment in Canada, says the National Watchman. The appliances for administering the treatment consist of a good sized glass bottle with a glass tube through the cork and running to the bottom of the bottle. To this the rubber tube of a bulb syringe is attached and for the nozzle of the syringe a milking tube is used. When a milking cow in good flesh shows suspicious symptoms just before or soon after calving, becoming restless, uneasy upon the hind feet, lying down and rising with difficulty, and the udder becomes soft and flabby, an attack of milk fever is to be apprehended. The udder should be bathed with warm water that has just been boiled, to which has been added a teaspoonful of carbolic acid to the quart. All milk should be drawn from the udder. Sixty grains of iodide of potassium should be dissolved in a quart of warm water that has been freshly boiled and to this one dram of carbolic acid is added. With the apparatus first described one-fourth of the solution should be injected into each teat. The cow should be kept dry, warm and free from excitement, away from noise, and no drenching should be given as long as acute symptoms are present. She should be turned from one side to the other every four hours, taking care to avoid injuring the udder, and the injection should be given again in six hours if signs of recovery are not present. Great precaution is necessary in injecting the solution in order that no air may enter the udder with it. To this end the syringe and nozzle should be first completely filled with the solution before the milk tube is inserted in the teat. Care must be taken that no minute foreign bodies, such as seeds and the like, drop into the solution, for if injected into the udder they are likely to seriously damage it.

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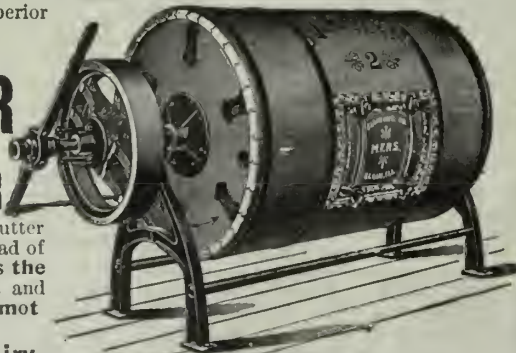
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 5.

SAN FRANCISCO, SATURDAY, AUGUST 4, 1900.

THIRTIETH YEAR  
Office, 330 Market St.

### In the Yosemite.

The Yosemite has become somewhat trite as a theme for comment and illustration. Twenty-five years ago hardly a volume of our journal was thought satisfactory unless it had a series of views in the valley and a collection of tributes of its beauty and grandeur by the best available writers. Now, in the rush of later developments, the Yosemite is but seldom noticed. It is but the natural course of events. The Yosemite has become classic; there it stands, accepted without debate, a masterpiece of the great forces which have formed the earth-crust, a sublime

less frequently in public prints, it does not follow that the concession of the similarity betokens less of popular interest. The reverse is true. The valley has recently advanced notably in national prominence. It is now envied by newly made reservations. It is guarded in its water supply and in its safety from devastating forest fires as never before. It assumes now new importance to the visitor and tourist, because it has become the magnificent gateway through which the formerly inaccessible grandeur of the higher Sierra region beyond it is now more easily approached. With the reservation of the Big Tree groves, through their purchase now ordered by Congress, the Yo-

\$5550. A permit has been granted to the artist Jorgensen to build a pretty rustic studio on the site of his old camping ground. A new foot walk has been constructed from the hotel to the upper camping ground. The hotel at Glacier Point is being renovated and plastered. Camping privileges in the valley are being extended; Bridal Veil meadow and Yosemite Fall meadow are now open to campers, thus thrice increasing the area available to those who desire to sojourn in the valley under their own tents. It has also been arranged that forage for animals shall be sold at a lower rate than formerly. Quite interesting improvements are projected for next



GLIMPSSES OF YOSEMITE SCENERY.

example of the transcendent intelligence which call those forces into existence. It is no longer necessary to inform people of its grandeur, nor to remind them of its significance as an exponent of creative power, nor to preach its lofty mission to lift the thought of mankind to higher things. And yet the Yosemite should not be lost sight of in current print. The rising generation should be exhorted to visit it, and those youths whose circumstances do not permit such journeys should be shown pictures which suggest its characteristic greatness and beauty. We have on this page a group of Yosemite views which were selected to represent the valley in the latest world-winning publication by the State Board of Trade, which properly includes such scenery as a part of the natural endowment of the State.

Although, then, in one sense the Yosemite appears

semiter will soon become the central gem in the string of beauties and wonders which will be reserved from spoliation and for the enjoyment and uplifting of all generations to come.

The progressive prominence of the Yosemite is also shown by the work which is being continually done for its improvement by the State authorities, to whom the valley was trusted years ago by the national Government. The Yosemite Commission, which has an office in this city in charge of the secretary, Mr. J. J. Lermen, is proceeding with improvements to render the valley more accessible to visitors and to minister to their comfort while there. The money granted by the State for this purpose is not large, and yet valuable improvements are secured each year. We learn from Mr. Lermen that three new frame buildings have been erected this year, costing

year, including better roads, an electric light plant, etc. With the vast water power available, it would seem rational to have the valley transformed into a grand electric exposition by night, thus giving the falls an unique beauty of which the ancients could have never dreamed.

The growing popularity of the valley is shown by the statistics gathered by the Commission. The travel this year is the greatest in the history of the valley. Up to July 1st 1855 tourists and 1517 campers went into the valley, and the total is expected to reach 5000 before the end of the season. Even greater numbers are expected next year, and greater still each year thereafter, as access becomes easier and cheaper. The valley has, in fact, hardly yet reached an intimation of its coming popularity and beneficent service to humanity.



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E. J. WICKSON..... Horticultural Editor.

San Francisco, August 4, 1900.

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## The Week.

July closes with a hot week which may be of some advantage to fruit driers who have ripe fruit for it, but it will be rather trying where the midseason fruit is entering upon maturity as it is in some of the coast valleys. The disposition to drop or mature too soon has been manifested for some weeks, and a hot blast now will no doubt increase the trouble, and increase the probability, which we have held to all through, that we are not to have too much fruit this year. So far as we have learned this belief is now becoming more widespread and prices are advancing for canning and shipping fruits which a couple of weeks ago were being systematically talked down. All good fruit will be wanted this year if well handled.

The distress of the foreigners in China is still acute although they have escaped massacre thus far. The nations are still massing forces to sufficient strength to cope with barbarism. From this port troops and supplies are going out at short intervals and it looks as though we might be on the route to the war for months to come.

Wheat is a little weaker in tone, but not lower for spot; options have declined since our last report, but there is now some degree of recovery. Barley is firm, though shippers are playing off, and the situation is thought to be strong. Oats are firm and higher and corn is firm at former rates. All millstuffs are unchanged and steady, except rolled barley, which is higher. Hay is quotably the same, but it is arriving pretty fast and buyers who have laid in largely are doing all they can to prevent a break in prices. Beef and mutton are steady and quiet. Hogs are firm at last week's advance and more Eastern are said to be on the way and soon to arrive. Butter and eggs are higher, while cheese is quiet, with some talk of lower range, but no change yet, though it is moving but slowly. Poultry is unchanged, with the hot spell against the stock. Dry beans are still in light stock, but ample for present calls. The Government is taking some small white beans. Potatoes are in heavy supply, but not lower yet, though being talked downward. Onions are fairly steady, yellow being preferred. The fresh fruit market is well supplied and no particular sensations. Peaches are selling better than last week and berries are also improved. Dried apricots have a wider range. There is a rush for choice, which are scarce, and prices are rising. Dried peaches are not here in large amount yet, but ear shipments direct East from producing points are

proceeding. No dried pears are in yet, but some dried apples have sold well for local use. Almonds are very strong and heavy purchases in Contra Costa county are reported up to 13c for paper shell varieties. The foreign almond crop is short. Lemons have done very well this week. The hot spell and the high price of limes gives the lemon right of way and the southern counties will be much helped. Wool is beginning to move freely. One operator is said to be taking most of the choice northern wools. The Eastern and foreign wool markets are now active and higher and the California supply will probably be made short work of. Hops are very quiet at present.

SOUTHERN CALIFORNIA has been notably aided through the discomforts of a dry era by the extent and value of her citrus fruit products. Some idea of the importance of these products can be had from figures compiled by the Los Angeles Herald, which gives the shipments to the close of last week at 16,850 carloads. With the present activity in summer lemons, it now looks as though the total shipments of oranges and lemons for the year to end October 31st will fall little, if any, short of 19,000 carloads, exceeding the record of the State by about 4700 carloads. Reports received from every citrus fruit section of southern California are to the effect that the summer crop of lemons is in first-class condition and that the yield will be larger than ever before. Oranges are still being shipped at the rate of eight or nine carloads per day, but the season is about at an end. They are meeting improved markets, while the demand for lemons is strong at \$2.50 to \$2.90 per box, f. o. b., with a tendency of growers to withhold shipments even at prevailing prices. There is every reason now to believe that this year's citrus fruit crop will bring to the State about \$8,000,000, and possibly \$8,500,000, a gain of from \$1,000,000 to \$1,500,000 over the best year in the history of the citrus fruit industry.

So the San Jose scale is no longer a bugbear in the sending of cured fruits to Germany. It is announced from Washington that among the good results of the late diplomatic agreement with Germany is the removal of the vexatious inspection of dried and evaporated fruit exported from the United States. These fruits will hereafter be admitted into Germany as formerly, without inspection on account of the San Jose scale. It has required two years of earnest work on the part of the State Department to convince the German Government that the danger from San Jose scale in American fruit was barely fanciful. The department was seconded in its efforts by some of the leading German boards of trade, and it was fully established beyond controversy that the San Jose scale, even if present in American fruit before drying, could not survive the evaporating process. This seems a very little matter, but it served as a pretext for those who did not want competition with our fruits, and it has taken a good deal to overcome it.

We are not proud of the work of one of the Paris Exposition judges hailing from this State. He writes a letter to a friend, who was foolish enough to publish it in a local paper, as follows: "I enclose a list of prizes I secured in our class for us—in many cases more than worth, but I guess I am justified in playing a little American politics in jury work. I thought so, anyway." This, apparently, means that the juror, representing California on the jury of awards, put down California exhibits for more than he thought they were worth and believes he was justified in such tricks. We hardly know which to condemn more earnestly, the obliquity of moral vision which would suggest such action or the folly of boasting of its smartness. The admissions of this juror as published in his county paper will probably go abroad and will not add to the luster of the American name to any alarming extent.

KANSAS, in celebration of the fiftieth anniversary of her admission into the Union as a Territory, proposes to hold in 1904 an inter-State exposition, to which the world will be invited. A strong organization has been effected to plan and carry forward the undertaking. F. D. Coburn, secretary of the Kansas Board of Agriculture, is the present head of the directory. The promoters of the enterprise promise that Kansas, through this 1904 exposition, will reveal herself to the world in an attractive light heretofore

little suspected by those who at a distance have unwittingly regarded her as merely a part of the wild and woolly West.

ARRANGEMENTS for the State Fair are proceeding satisfactorily. At a meeting of the directors, held in Sacramento last week, Secretary Shields said that the society had assurances that the coming State Fair would be the greatest show that was ever given on the coast, and that the racing card would be the best ever known. Preparations for the Fair are now rapidly advancing.

## QUERIES AND REPLIES.

### Killing Weevil in Stored Grains or Legumes.

TO THE EDITOR:—Can you tell me what to do to keep the bugs from eating peas after they are threshed out—something that will not make them injurious to feed to hogs—and give the name of some firm selling what you recommend?—A. V. FLEMING, Fish Rock, Mendocino county.

The insect eating stored peas is presumably the pea-weevil, which enters the peas while it is still green in the pod and proceeds with its larval growth and transformation after the pea has ripened. The way to kill these insects is to use a poisonous vapor as soon as the crop can be gathered. The most available material is carbon bisulphide, which is freely used in this State for killing squirrels in their burrows. Use a tight bin or tank or cask or any other receptacle which will hold water. Nearly fill it with the peas and arrange to cover it with old canvas or carpet or several thickness of burlaps—leaving only space enough at the top to allow the handling of the poison. Take the liquid carbon bisulphide and pour it into a dish placed on the top of the peas—using about a teaspoonful of the liquid to each cubic foot of the contents of the receptacle and put on the cover. The liquid vaporizes readily and the fumes, being heavier than air, will sink to the bottom of the tank, displacing the air as the vapor is progressively set free from the dish above. This vapor will penetrate the peas and will kill all animal life in them. Allow the receptacle to remain covered for several hours. When the cover is removed the gas will gradually work away into the air, or the receptacle can be emptied and refilled for a fresh start. This gas has a horrid smell, but it will disappear so that not the faintest trace will remain, and the peas will be perfectly wholesome for many purposes. As the gas is inflammable, it must be used in the daytime in a place where there is no fire and no smoking allowed during the process. Carbon bisulphide is sold by most country storekeepers, or it can be had from any wholesale druggist or grocer in the city. In ordering, call for the Wheeler bisulphide, which is cheap and made especially for vermin killing. The higher-priced, chemically pure article is not needed for these purposes.

### Casabana, Japanese Orange and Jamaica Sorrel.

TO THE EDITOR:—Will you inform me as to the value of the fruit known as "Casabana," its quality and taste, and also state if desirable to cultivate for market?

Is the "Japanese orange" (*Citrus trifoliata*) desirable as a hedge plant, and are the fruits of value as food? How and when should plants be started, and where can they be obtained?

I find "Jamaica sorrel" highly recommended for home use, being in quality similar to the cranberry for sauce, etc. Can you tell me where to find it and how to grow it?—M. A. L., Red Bluff.

The fruit known as Casabana is the product of a vine. It has the general appearance of a large, ripe cucumber, except that it is of a deep red color. The flavor, so far as we have learned it from specimens grown here, is hardly better than that of a ripe cucumber, and we apprehend that it will never be considered of value except as a curiosity.

The Japanese orange is undoubtedly desirable as a hedge plant, and it is also used as a dwarfing stock for other fruits of the citrus family. Its own fruit is of no value. The seed can be obtained from Japan in any quantity by dealers in seeds and plants, and most nurserymen can furnish the plants.

The so-called "Jamaica sorrel" is proving of great value in this State, especially for jelly making, and its common name here is Roselle. It is readily grown from the seed, which can be obtained from seedsmen. The plant should be grown like a tomato plant, and



the part used for jelly is the fleshy calyx or husk of the seed pod.

Brown Rot on Moorpark Apricots.

TO THE EDITOR:—I send you specimens of a rot which has appeared on Moorpark apricots in this district to such an extent that a considerable amount of fruit is ruined. We have never had it in such amount before, and desire to do what we can to arrest the progress.—WILLIAM BARRY, Horticultural Commissioner, Niles.

Mr. Barry sent us fruit in various stages of coloring up, but all of it quite firm. Each fruit had a brownish discoloration, covering a third to half of its area, also firm to the touch. In the center of each of these brown places was a slight depression, and from the cracking skin at the depressions there was a slight outcropping of globular spore-masses of a fungus. It was an appearance we have often seen before, but usually upon only a few fruits to the tree, not enough to constitute any loss worth speaking of. The fact that it has reached such an extent this year in at least one fruit region warrants attention to it.

Mr. F. T. Bioletti, the mycologist of the University Experiment Station, after seeing Mr. Barry's specimens, went to Niles and examined the disease, and took photographs of one of which the adjoining engraving is a reproduction. Mr. Bioletti also furnishes the information and advice which is appended:

The disease is known variously as brown rot, fruit rot and twig blight. It attacks various kinds of fruit and is particularly injurious to peaches in the Eastern States and prunes and apricots on the Pacific slope. The cause of the disease is a fungus called *Monilia fructigena*, which attacks the fruit when it reaches full size, and, in the case of apricots, just before ripening begins. The first symptom is a brown spot on one side of the fruit. This spot gradually enlarges, and about the time that one-third of the apricot is attacked an ash-gray covering appears near the center of the spot, consisting of myriads of spores. Soon the whole apricot turns brown and the entire surface becomes covered with the spores of the fungus. The fungus then passes from the fruit through its stem into the twig. Finally the disease attacks the twig so severely that it dries up, loses its leaves and dies. The accompanying illustration

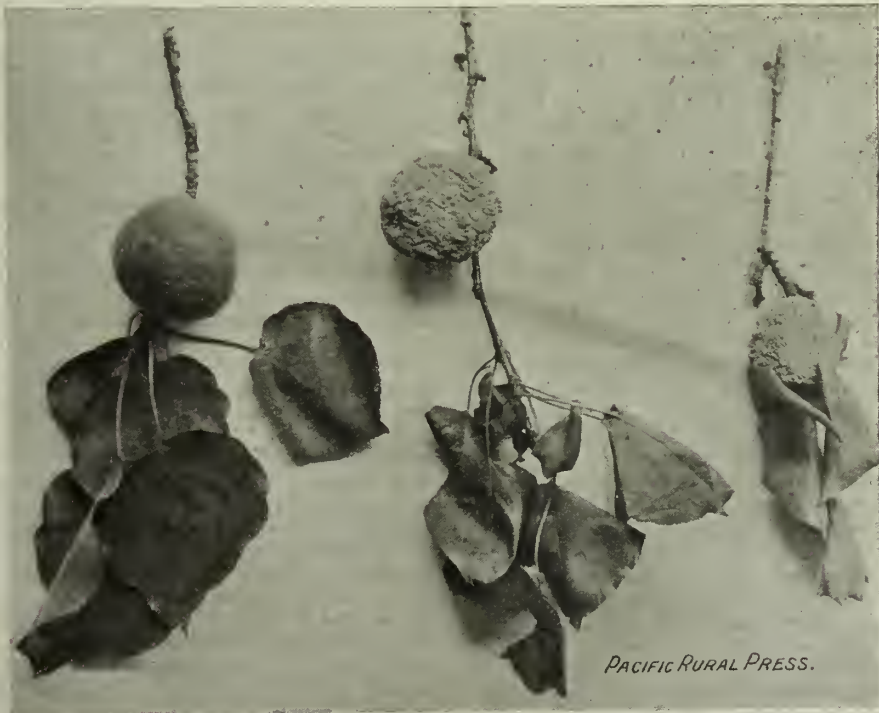
The same, doubtless, occurs in the case of apricots. Over 50% or more of the crop of peaches and prunes is destroyed by this disease, and in some apricot orchards examined this year there has been an almost equal loss.

As the fungus passes the winter principally upon the mummified fruit, the most effective method of combating the disease is to remove and to destroy thoroughly all the diseased fruit. The diseased apricots should be gathered and destroyed as soon as the brown spots indicate that they are attacked, and not left on the trees until the fungus had penetrated the twigs. This measure should be followed by a spray that will kill the spores remaining attached to the tree. In the Eastern States peach growers are advised to spray with a solution of one pound of blue-stone to twenty-five gallons of water just before the buds begin to swell. A winter spray with our ordinary lime-salt-sulphur mixture would doubtless be equally effective and at the same time do good work in destroying scale and other insects. In badly infected orchards it would be well also to spray the trees later, at the time the buds are swelling with Bordeaux mixture, though this might in most cases be omitted and a treatment with this mixture applied as soon as the fruit has set. Later treatments, when the fruit is large, will be necessary here only in exceptionally moist (foggy) seasons, and should consist of a spray of ammoniacal copper carbonate, which does not discolor the fruit as does Bordeaux.

Orange Scale.

TO THE EDITOR:—I am sending you a small bough cut from one of our orange trees and shall be obliged if you will kindly tell me what the scale is on the bark and the stickiness on the leaves, and the cure for it. The trees are eight-year-old Navels and look strong and healthy, but many seem to be affected in the same way as the bough I send you. Any information about I shall be obliged for.—F. BUDGETT, Penryn.

The branch has a good amount of young lecanium scales and the stickiness of the leaves is caused by the honey dew which is exuded by them. The growth is splendid, both in wood and foliage, and the scale can be easily killed by spraying if the application is thoroughly made so as to reach all parts of the bark



Progress of Brown Rot on the Fruit, Foliage and Wood of the Apricot.

shows apricots and twigs in various stages of the disease and the gradual progress from the fruit to the twigs is well shown. In the fruit on the left, if one looks closely, he can see that the lower half is darker colored than the upper and the outcropping of spores is seen. In the center specimen the fruit is covered with fungus and the leaves are drying. In the fruit on the right the leaves are shriveled and the fungus has passed into the wood of the twig.

The attacked fruit, instead of becoming soft and falling off, as with most other rots, gradually dries up and remains firmly attached to the tree until the following spring. In spring a new crop of spores is produced by the mummified fruit, and, in the case of peaches, the young growth and blossoms are attacked.

and leaf surface while the insects are vulnerable as they now are. Spray with the kerosene emulsion or the resin wash, of which formulae were given in the columns of the PACIFIC RURAL PRESS of May 5, 1900. Either of these will kill and not injure the foliage. Make another application in a month to catch any that may escape the first dose and then watch for reappearance later. By careful attention you may keep well ahead of the pest.

California State Floral Society.

TO THE EDITOR:—Wishing to become a member of the California State Floral Society, will you give me through the PACIFIC RURAL PRESS the necessary steps to take?—MRS. MARY HODGSON, Butte City, All interested in floriculture are welcomed to mem-

bership. The initiation fee is \$1 and the dues 25 cents per month. Applications for membership can be addressed to the secretary, Mrs. H. P. Tricou, 846 Grove street, San Francisco. The regular meetings are held on the second Friday of each month, at 2 in the afternoon.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending July 30, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

Conditions have been favorable for maturing crops during the week. Higher temperatures toward the close caused deciduous fruits to ripen rapidly. Much fruit is being shipped green; it is reported that the scarcity of labor will cause a considerable loss, as the fruit will spoil before it is possible to gather it. There are good indications of a large crop of grapes; some of the early varieties are now being marketed. Oranges and olives are in excellent condition and will probably yield better crops than last season. Corn, beans and melons are yielding good crops. Hops are improving and give promise of a fair crop in some places. Wheat harvest is still progressing, and all reports confirm the shortage mentioned last week.

COAST AND BAY SECTIONS.

The weather has been favorable for crops and for farm work. Harvesting and threshing continue. Reports do not show any improvement in the yield of grain, which is much below the average, and in some sections it is reported that the quality is inferior. The potato blight in Humboldt county is being checked by spraying with the Bordeaux mixture. Corn and vegetables are doing well. The yield of apricots in many places is considerably better than had been estimated, although in some orchards the entire crop was killed by late frosts; the fruit is small, except in orchards that had been irrigated. Prune picking has commenced in some sections. There are reports of the serious dropping of this fruit in many orchards, and the yield may be less than estimated. Peaches and pears are yielding heavy crops. Grapes continue thrifty in the northern section, but are not doing so well in the southern coast counties.

SAN JOAQUIN VALLEY.

Clear and pleasant weather with light northerly winds prevailed during the past week, and was favorable for harvesting and the maturing of the fruit crop. In the northern portion of the valley the reports of the grain harvest are quite discouraging, but farther south the yield and quality are fully up to expectations. The crop as a whole will be below the average. Some grain is being shipped to tide water, but the greater portion is going to the warehouses. The beet crop in San Joaquin county has been greatly damaged by the blight, but as yet the full extent of the injury is not known. The reports from the vineyards in the vicinity of Fresno state that the grape crop will be short and may fall below that of last year, owing to thrips, red spider and sunburn. Peaches, prunes, pears and vegetables are progressing favorably. Almonds promise a fair crop. Alfalfa is doing well. Some plowing being done.

SOUTHERN CALIFORNIA.

The weather has continued warm and dry, with cool, foggy nights, in some localities. Large quantities of small fruits are being marketed at San Diego. Canneries in Los Angeles are working on fruit shipped in from the San Joaquin valley, and there will be but little work for the dryers this season. Walnuts are dropping badly in some places, but in other sections they are reported in good condition. Some damage was done to nuts and trees by the extreme heat on the 22nd and 23rd. Pasturage continues good in most places. Irrigation water is holding out very well. Citrus fruits are thrifty.

EUREKA SUMMARY.—Grub worm is doing considerable damage to vegetables on bottom lands north of Eureka. The outlook for potatoes is more favorable where spraying has been thorough. Harvesting of oats will begin this week.

LOS ANGELES SUMMARY.—Last week's hot weather injured corn, beans and vineyards, and will hasten grape harvest, through premature ripening. Peach and prune trees have their usual foliage at last.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Aug. 1, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.	Total Seasonal Rainfall to Date.	Total Seasonal Rainfall Last Year to Same Date.	Average Seasonal Rainfall to Date.	Minimum Temperature for the Week.	Maximum Temperature for the Week.
Eureka.....	.00	T	.00	.10	48	64
Red Bluff.....	.00	.00	.00	.04	60	106
San Francisco.....	.00	.00	.00	T	54	98
San Francisco.....	.00	.10	.00	.04	52	88
Fresno.....	.00	.00	.00	.00	58	108
Independence.....	.01	.07	.00	T	48	78
San Luis Obispo.....	.00	T	.00	T	58	86
Los Angeles.....	.00	.00	T	.04	64	82
San Diego.....	.00	.00	T	.04	64	82
Yuma.....	.00	.02	.06	.18	74	108



## THE VINEYARD.

### Not the Anaheim Disease.

TO THE EDITOR:—The subjoined report of Mr. Bioletti, assistant in charge of viticulture at the University of California Experiment Station, on an examination made of vineyards in the Santa Clara valley supposed to be suffering from the Anaheim disease, is of wide interest at this time, and is, therefore, sent for publication in papers circulating in the region concerned.

I would add to the statements made that the insufficient rainfall of the past three seasons having failed to soak the ground to the full depth to which the roots of trees and vines reach in our deep soils (10 to 20 feet), it is but natural that the growth of the two previous dry seasons has exhausted the moisture in those lower depths, so that, unless irrigation has supplied the deficiency, it will be very generally found that the substrata are now drier at 8, 10 or 12 feet than at 5 or 6, to which the winter rains have wetted the land. The trees and vines started out in spring in good heart and with a full crop, but as the advancing season exhausted the moisture around the deep roots that in ordinary seasons supply the summer demand, the dropping of the fruit, such as has happened in the case of prunes especially, is the natural consequence. The trouble is not caused by any disease, except in cases where the weakening of the tree or vine has given some previous infection fuller play; and the remedy is either irrigation or a good soaking winter season, such as has usually come, in the past, every three or four years. E. W. HILGARD.

Berkeley, July 19.

#### MR. BIOLETTI'S REPORT.

The Agricultural Experiment Station at Berkeley received during the month of June a large number of inquiries regarding diseased vines, most of such inquiries being accompanied by specimens of the leaves. A major part of these came from the principal vine growing parts of the Santa Clara valley, though others were received from several other counties. Most of the leaves received showed no signs of insect or fungous parasites, but brown and dead areas in spots or near the edges, accompanied by more or less yellowish or reddish discoloration. In the various vine growing districts of the Santa Clara valley the fear (amounting almost to a panic) was general that the vines were attacked by the dreaded Anaheim disease. Some were of the opinion that it was a new disease, which they dubbed the "West Side" or "San Jose" disease. After carefully examining vineyards in the principal affected districts, my conclusion is that there is no reason for supposing that the Anaheim or any new disease has invaded the Santa Clara vineyards. All the cases of short growth, yellowing or reddening of the leaves and death of vines may be referred to one or more of the following causes, which are placed in order of their importance:

1. Phylloxera.
2. Drought.
3. Wood rot.
4. Imperfect union of graft.
5. Root rot.
6. Injuries to the bark of the stem.

**PHYLLOXERA AND DROUGHT.**—The first two are by far the most prevalent and disastrous. It should be kept in mind that almost all diseases and injuries have a much more severe effect on plants when they are weakened by drought than in normal seasons. This is especially true of phylloxera, as is well exemplified in some of the worst affected districts on the West Side, where the last three seasons of insufficient rainfall have not only injured the vines by depriving them of sufficient water, but have favored the spread of the phylloxera on the roots and rendered its effect more deadly. A vine attacked by phylloxera will succumb much more quickly if poverty of soil or lack of moisture prevents it from forming new roots to replace those destroyed by the insect. In many vineyards which showed general short growth phylloxera could be found only in spots. In these drought was the main cause of injury; and neighboring vineyards, which were irrigated properly in June, looked quite healthy. Some vineyards which were irrigated, or naturally moist, showed dead vines and short growth. In these phylloxera could be found on all the sick vines.

**WOOD ROT.**—In some old vineyards where there was no phylloxera, and the nature of the soil and location had prevented suffering from drought, a few (about 1% or 2%) sick and dead vines were found scattered sporadically among perfectly healthy vines. Vines slightly attacked showed a slight yellowing and early dropping of the leaves, often on one side of the vine only. Vines in a more advanced stage showed short growth and a more general falling of leaves. Vines in the last stages had made almost no growth and were completely defoliated, while finally some had not even started in the spring, though occasionally suckers had grown from the base or from below ground. Next to a block of thirty-year-old Mission and Mataro vines, where these appearances were common, was a block of the same varieties of the same age which had been grafted two or three years before. In the grafted block no sick vines were found. An examination of the sick vines disclosed the fact that the interior of the stem was more or less decayed. This decay, in practically all instances, started in the head of the vine and could nearly always be traced to a large wound made by cutting off a large arm or several smaller arms near together. The decay,

which was doubtless caused by root rot fungi, seldom extended far down the stem, and in none of the cases below the ground. This accounts for the immunity of the grafted block and suggests grafting as a remedy; for, according to the owner, the vines took at least two years to die after the first appearance of the trouble.

**IMPERFECT UNION OF GRAFT.**—In a few vineyards grafted on resistant stock vines had died on account, as shown by examination, of an imperfect union of the scion with the stock, due to inferior grafting or grafting when the stock was too old.

**ROOT ROT.**—A few spots of dead vines were found in some otherwise vigorous vineyards which could not be accounted for by any of the above causes. These were doubtless due to root rot fungi, which often destroy vines and orchard trees which are planted in places from which large oak trees have been removed. The oak chips and remains of the stump and large roots decay and become full of toad-stool fungi, which finally enter the roots of the vine and destroy them. This may occur when the vines are young, but usually serious injury does not appear until the vines have borne for several years.

In conclusion I would say that, as far as my examinations extended, there was no reason to suspect the presence of the Anaheim disease, and that all the sick and dead vines can be accounted for by ordinary unfavorable causes, intensified in their effect by three seasons of insufficient rainfall.

Berkeley, July 18.

FREDERIC T. BIOLETTI.

### Cutting-Grafts Strongly Approved.

TO THE EDITOR:—In regard to whether field grafting or "cutting-grafting" is the best method of establishing a vineyard on resistant roots, I beg to submit the following:

**BEHAVIOR OF CUTTING-GRAFTS.**—I find that cutting-grafting is the quickest, most economical and safest plan to get a good even stand of vigorous and heavy bearing vines. In fact it has exceeded my highest expectations. Of cutting-grafted Tannat on Rupestris St. George, plain rooted cuttings of Tannat and rooted Rupestris St. George cuttings, all of the same age and planted alongside one another on the same soil a year ago last spring, the first named have made the biggest growth; they are all up to the top of the stakes and some have a good many grapes already. The plain rooted Tannat are at least a year behind the cutting-grafts, while the Rupestris St. George vines, although they have made vigorous growth, are waiting to be grafted next spring.

The union of the cutting-grafts shows the highest perfection that could be obtained. There was no suckering of the Rupestris stock at all, and only about one-third of the vines had made roots from the scion the first year, although I had them set at least 4 inches with the union below the surface. On account of this little tendency of throwing out roots from the scions, the cutting-grafts can be safely set with the union below the surface in our dry California soil, which would lessen very much the danger of the stock breaking below the union in later years if left without stakes, as is claimed by some.

**CALIFORNIANS SHOULD SUCCEED.**—I do not see why a success should not be made of cutting-grafting in California as well as in France. We certainly have had just as much success in grafting vines, and just as much success in rooting cuttings. Should we not be able to combine the two operations as well? We certainly can if we California vineyardists have as much intelligence as the French. One would almost doubt it, reading such writings as those of the Napa county professor.

**GOOD UNIONS.**—The greatest advantage in cutting-grafts is the perfect union of scion and stock, which is attained by field grafting two or three-year-old vines only at the rate of about 25% at the very best. Going over an old vineyard on resistant roots one cannot help noticing the great irregularity in the size and bearing capacity of the vines; while some leave nothing to be desired, others show a rather low vitality, while a few have died altogether. By examining the different vines, one will find that a poor union has in almost every case been the cause of the failure.

**CHOICE OF RESISTANTS.**—In regard to choice of resistants, I should say that I consider Riparia Gloire de Montpellier of as great value as Rupestris St. George, at least for the Santa Cruz mountains. On all deep soils, i. e., subsoils which are not impervious to its slender rootlets, it thrives and makes a splendid grafting stock.

**RESISTANTS STRONG GROWERS.**—I want to say here a word against the prevailing opinion, that a resistant vine grows slower than a Vinifera, as is in fact in most instances the case, in consequence of the wrong and ignorant way of propagating and planting the vines. Although their wood is more slender, Riparia and Rupestris are both quicker growing vines than the Viniferas, but they are more particular in regard to soil and climate, and therefore more easily stunted. If all the conditions of heat develop-

ment are complied with, they will excel anything in the Vinifera line in quickness and vigor of growth.

As far as Lenoir is concerned, it does very well on all kinds of rich soils, but loses very much in vigor after grafting, so that, in fact, vines on Riparia on soils which are favorable to this variety show more vigor than vines grafted on the former. For poor and dry soils, I consider it a failure altogether.

For my part I am very thankful for the benefit I have derived from the experimenting and teaching of proper methods of the viticultural department of the State University. I would almost as soon part with my ranch, than do without the reports and bulletins issued by it for the benefit of the ranchers of California.

H. HOOPS.

Wrights.

## THE DAIRY.

### Guernseys in California.

TO THE EDITOR:—Are there any Guernsey cattle in California? If so, why do we not hear more about them? I notice that the premium list of the San Francisco and San Mateo Counties Fair does not even mention them.

According to Hoard's Dairyman, the official tests of Guernsey cows the past year developed the fact that there were two cows of that breed that produced cream enough to make 912½ and 828.95 pounds of butter in one year. How many more of the breed made great records I do not know, but doubtless there were a good many. If these printed statements are so, and there is no reason to doubt them, it would seem that a few of these cattle would be a good thing for California to possess. Perhaps if we had a few more 500 pounds butter cows it wouldn't be necessary to have so much butter shipped from the East. Better cows and more of them should be the cry in this State; also, better treatment for the cows already owned here. It is rather poor encouragement for a cow to do much in the butter line when she has to hunt the dry side of a strawstack to keep out of the rain or wind, or dig a hole in the same stack, at the risk of having it fall over on her, during the frosty nights of winter. This is no fancy of the imagination, as I am personally acquainted with farmers owning 400 acres of land, from fifteen to twenty cows, and not a barn or cowshed on the ranch.

And they sell cream to the creamery, too—that is, they sell some cream, but it is only an apology to what they would have to sell if they had good butter cows and took proper care of them.

It would be a most philanthropic thing to do if some enterprising man would have a few carloads of Guernseys shipped into this State, and he wouldn't lose any money on his cows either, as they should sell like hot cakes, when their good points were understood, and a demonstration at the pail would soon educate people to value them at their true worth. From their description they are said to be somewhat more hardy and rugged than Jerseys, not so particular as to their food, less nervous, and also somewhat larger, all good points in their favor. Then they are said to have the highest colored milk of any breed. A gentleman in New Jersey wrote me that he had difficulty in convincing his customers that he did not put any coloring in his milk. He also said he kept Jerseys, too, but that he much preferred the Guernseys for the reasons given above. It is common for them to give milk testing 6% butter fat.

Mr. Grupe of Linden, Cal., writes me that he has recently had shipped him from Wisconsin a bull calf and a heifer, Guernseys. The express charges on same were 13 cents per pound. This makes it pretty expensive for a start in this breed, especially when a good round price is paid at the point of shipment for the stock. But I like to see this spirit of enterprise and wish there were more like Mr. G., and that California had her share of this grand breed. Mr. G. will undoubtedly never be sorry that he has made his start, and he has conferred a benefit on the community in which he lives. If the man is blessed who makes two blades of grass grow where there were none before, how much more so is the man blessed who is the means of raising the grade of cows in his community from 100 pounds of butter per year, or less, to 300 or 400 or 500 pounds per year. That this can be done with proper cows and feeding is no longer a disputed fact. It has been done in other States, why not in California. Now, I am living in town, do not own any cows of any kind, but hope to some day; so I have no axe to grind in putting forward in a feeble way the great benefit of having "better cows and more of them," and then caring for them properly.

W. H. PEARSON.

Lorin, Alameda county.

There are a few Guernsey cattle in California and there might be many more to the advantage of the dairy interest. Sufficient effort has not been made to popularize the breed in this State. The Jersey interest has predominated, and those who have made some effort to win favor for the Guernseys have become discouraged and the stock scattered. The



Guernseys are good cattle. They can be popularized here by exhibition and advertising, just as the other breeds which now predominate here have been. Those who wish to accomplish this must not only pay well for the best blood, but they must spend money and effort and let people know what they have and how good it is.

#### Experiments in Soiling and Pasturing Cows.

D. H. Otis sends us an interesting review of experiments tried at the Kansas Agricultural College to determine whether it is more profitable to cut and carry forage crops to cows or to give them land enough from which to crop their own living. On May 10, 1899, twenty-one cows of the Agricultural College scrub herd were divided up into two lots of ten and eleven cows, respectively, one lot to be fed on green soiling crops and the other lot kept on pasture. Lot 1 was giving an average daily yield of 207 pounds of milk and Lot 2 about 206 pounds, the average test being about 3.7% butter fat. Each cow was given what grain she could eat at a profit, the average being a little over three pounds per day per head. The green feeds used were alfalfa, oats, corn, cane and kafir corn. The pasture was composed of both prairie and mixed grasses. It should be noticed that timely rains made 1899 an exceptionally good season for pastures.

The following table gives the amounts of green feeds consumed by ten cows and the income per acre, after deducting the cost of grain eaten. Butter fat is figured at creamery prices and skim milk at 15 cents per 100 pounds:

	Pounds.	Per acre.
Alfalfa, 74 days.....	77,145	\$25 26
Oats, 9 days.....	12,225	6 81
Corn, 31 days.....	38,695	22 79
Cane, 15½ days.....	22,370	15 60
Kafir corn, 14½ days....	17,550	13 83
Average.....		\$18 08

In a similar manner the pasture cows brought an income of \$4.23 per acre.

From these figures we find that it required an average of 116 pounds of green feed per cow per day, including what little was left as waste. It required .71 of an acre to support a cow on soiling crops 144 days. During the same period it required 3.63 acres to keep a cow on pasture. It will be noticed that alfalfa was fed seventy-four days. This was from May 10 to August 1, except nine days the forepart of June, when the oats were fed. Where alfalfa is properly managed it can be made to produce green feed during the whole summer. The corn was fed during the month of August. Cane was fed for the first half of September and kafir corn for the last half.

The pasture cows yielded the most milk by 6618 pounds and the most butter fat by 280 pounds, but consumed 1232 pounds more grain. The soiling crops brought an income above the cost of grain of \$18.08 per acre, while the pasturage brought only \$4.23 per acre. Of the soiling crops, alfalfa gave the largest returns per acre, corn next, cane third, kafir corn fourth and oats fifth. The average result shows that it is possible to get over four times as much per acre by soiling as by pasturing. This does not mean that soiling always pays. It will depend largely upon the cost of labor and the amount of pasture land a person may have. Not considering the amount of land used, our cows did the best on pasture.

Nearly every dairyman has experienced the shrinkage that comes in mid-summer, when the pastures dry up and grass is scarce. It is at this time that soiling will pay and pay liberally. In what better way can a person realize from \$23 to \$25 per acre for his green corn or green alfalfa? When the cows look over the fence with longing eyes at the corn, the efforts usually spent in keeping the cows out of the corn had better be spent in throwing the corn over to the cows. The green corn, alfalfa or cane growing alongside of the pasture will pay greater profits if marketed to cows in need of extra feed than if held and sold to the local grain dealer, and, not only that, but it will keep up the flow of milk and increase the profits derived from dairying on dry feed next fall or winter.

#### Precocious California Heifers.

Miss M. L. Eckles of San Dimas, Los Angeles county, writes to Hoard's Dairyman: I have a Jersey heifer which was served when five months old. Four months after I found her udder very full of milk. Thinking she had aborted in pasture, I commenced milking her. She being such a calf, and milking so early, I weighed her milk until I was surprised by her calving on time (proving no abortion), after giving 1300 pounds of milk, testing at best 5.2% butter fat.

She then gained rapidly to three gallons per day, testing 6.3%. Her own weight was but 425 pounds. After her second calf, twelve months later, she gave three and one-half gallons that tested 7.4%, and she weighed 500 pounds. She has milked since for fifteen months—is giving two gallons now, testing 7%. She is inbred Forget-Me-Not, Alpha and Stoke Pogis

3rd, is dark brown in color, with jet black horns, a calf of the bull Karrakus, A. J. C. C., No. 20680.

Five of his heifers have milked profitably before first calving, and nine were left perfectly dry after milking for a year (as it was thought best to let them rest and grow some, as they were all small size), but, after being dry for some three or four months, freshened up and milked well when turned on lush pasture again. Five of the old cows have not been dry for seven years.

#### HORTICULTURE.

##### Time of Pruning Affecting Time of Ripening of Apricots.

TO THE EDITOR:—The apricot season is just closed and the usual summer pruning will next be in order. The apricot crop is the most difficult one to handle that the fruit grower has to deal with, because the fruit comes in with a rush and it is impossible to secure hands to care for it before a considerable quantity of it spoils. If the crop would ripen over a period of one week longer time, there would be scarcely any loss if the fruit were handled properly when it was gathered.

During the last three years we have been experimenting with the different methods of pruning the apricot. With twelve varieties we have experimented on the time of pruning, using the same method straight through; on some others, different methods were employed. Half of each of the twelve varieties referred to above have been pruned in July, during the last three years, as soon as the fruit was off; the other half was pruned late in December.

THE RESULT.—For convenience we will call summer pruning No. 1 and winter pruning No. 2. When blossoming time came there was practically no difference in the time of blooming, as the process dragged over a period of from twenty to thirty-five days. The chief difference was in the time of ripening. Beginning with the earliest varieties, the difference in the time of ripening was as follows: Pringle's Early, five days between No. 1 and No. 2; Newcastle, eight days between No. 1 and No. 2; Sardinian, a difference of seven days; White Royal, seven days; Blenheim, eight days. With this variety the main crop was gone three days from No. 1, before the first picking was ready on No. 2. The last picking of No. 1 was ready to come off with the first picking of No. 2. At this time, July 20th, the last few apricots are ready to be picked from Moorpark No. 1, while the fruit on No. 2 is all too green. There is already a difference of seven days between No. 1 and No. 2. There was a difference of about six days with Hemskirk.

Here is a pretty strong hint for those who have apricot orchards. We have been following the two times of pruning for three years and this is the first season that so marked a difference is shown. We have found that the summer-pruned trees bore the most fruit, but it was not as large as that on the No. 2 trees, simply because there was more of it. These trees were all pruned alike, the only difference being in the time.

PRUNING METHODS.—The method followed was that adopted in the extensive fruit districts of the Sacramento valley, i. e., severe cutting back of each season's growth and not a light thinning out of branches. Some growers imagine that because the apricot bears on old wood (which the peach does not) it is not necessary to prune heavy and force an abundance of new growth; yet, while some of the best fruit grows low down on old wood, that is even better when the tree has made a vigorous growth and laid on an abundance of new sap wood. Our method of top pruning is the same as with the peach. Where two or more strong shoots go up from the top of a limb that has been cut off the previous year, we cut one of them off short, leaving about four or five buds. These make a strong growth from which to start a head the following year. The remaining limbs are cut back to the whorl of twigs that bear the fruit buds. When pruning time comes cut them out. This leaves the tree in the same condition as it was at the start. There may always be a certain amount of thinning out to do, and if at the beginning the long-trimmed shoots are too thick, cut part of them out entirely. Keep the entire tree open enough to allow plenty of light to reach all of the lower main limbs or else the inside fruit buds will be weak. In order to do this it is generally necessary to cut out suckers, and some new growth even, before the fruit is ripe. On trees that are heavily pruned, there is always a more or less vigorous growth of suckers, which indicates an abundant flow of sap.

J. W. MILLS,  
Foreman University Sub-Station, Pomona.

CANVAS can be made mildew proof without injury to the fabric. Dissolve 1 pound zinc in 40 gallons water, add 1 pound sodium carbonate; when dissolved add 2 ounces tartaric acid. Soak the canvas in the solution for twenty-four hours, and dry without wringing.

UPON the completion of the Trans-siberian Railway it will be quite possible to "go around the world in a month," by securing special trains and making sure connections. There need not be over twelve changes.

#### THE FIELD.

##### Alfalfa Growing.

Probably the plant doing most to revolutionize agriculture in the central west is alfalfa, and in his latest publication, "Forage and Fodders," Secretary F. D. Coburn, of the Kansas Department of Agriculture, presents a complete and comprehensive article on this subject. The author is Prof. Geo. L. Clothier, a careful student of alfalfa, and for many years identified with the Kansas Agricultural College. Through what he commends for Kansas does not always suit California, the points made are very suggestive. Pertinent excerpts from the article are presented herewith:

PREPARATION.—The preparation of the soil should rightly begin two or three years before the time of seeding alfalfa. If the land is so weedy that it cannot be cleaned by cultivation, it should be fallowed for one season prior to the seeding. If it is desirable to subsoil the land, this should be done a year before seeding to a depth of 15 to 20 inches, and may be followed either by fallow or a cultivated crop. Time enough should intervene between the subsoiling and the seeding to allow the soil to settle, and to store a bountiful supply of moisture.

The seed bed should be as fine as an onion bed, and the subsurface be rather firm and well supplied with moisture. If the soil is deficient in humus, a liberal coating of barnyard manure plowed under at the time of subsoiling will add greatly to its physical condition, and thus help to start the young plants. If the soil is very sandy, the manure will be of great value in preventing the sand from blowing and in conserving moisture. A very sandy soil is not benefited by deep plowing or subsoiling. If the soil is heavy, and it is not practicable to subsoil, it should be plowed to a depth of 8 or 10 inches several months prior to seeding. If the land is allowed to lie fallow after this treatment, or has been fall plowed, it should be thoroughly disked every three weeks during the summer or autumn, as the case may be, to keep a dust mulch on the surface and prevent evaporation.

The time of seeding is of great importance. This should be determined more by the absence of unfavorable conditions than by the season. Alfalfa has been successfully sown in Kansas in every month from March to September [and it might be added in California every month from September to March, through December and January are worst.—Ed.] Where the ground is not weedy, spring seeding has been practiced with success. The cold rains of spring, however, when excessive, sometimes cause the young plants to rot off, as would be the case with the adult plant when submerged for two or three days.

SEED.—The quantity of seed to sow per acre is a question of considerable importance also. The majority of successful growers advise twenty to thirty pounds. If the seed were universally good, and the ground always well prepared, this would be grossly extravagant. A pound of alfalfa seed contains about 210,000 seeds. If 90% of them germinate, twenty pounds per acre would give 3,780,000 plants, or eighty-eight per square foot. After nine-tenths of the young plants have perished from crowding or accidents we would still have an ample stand. From these facts one can readily find the reasons for difference of opinion among good farmers as to the quantity of seed to sow. As low as eight to ten pounds per acre have frequently been used with success.

The quality of the seed is another very important factor. Good germinable seed should always be used. The percentage of germinability should be ascertained by a test before sowing. This is easily obtained as follows: Count out a 100 seeds and place between two pieces of muslin. Invert a small dish in a larger vessel and pour water around it. Place the muslin with seeds on the inverted dish. Let one end of the muslin hang down into the water. Saturate muslin and seeds before putting them into the germinator and set the whole in a warm place. The sprouted seed should be counted and discarded at intervals of two or three days until all have germinated that will do so. The number germinated will give the per cent of germinability. This ought not to be less than 75%.

The color of fresh alfalfa seed is a greenish orange yellow. As it grows older it all slowly turns to a yellowish brown color.

SEEDING.—Alfalfa may be seeded broadcast or in drills. It is preferable to seed with a drill having a press wheel attachment, because the depth of planting can be better regulated. The seed should be covered about 1 inch in depth, unless the surface be very dry, when somewhat greater depth is admissible. A good method to secure a better distribution of plants is to sow ten pounds of seed, running the drill in one direction across the field, and then cross-drill with the other ten pounds. If the drill has no grass-seeder attachment, the seed should be mixed with about three times its weight of coarse cornmeal. When intended for a seed crop, alfalfa should be sown thinly. Thick sowing improves the quality of the hay; but the plant has wonderful ability to adapt itself to either thick or thin seeding. One good,



stout, healthy crown has been known to produce 360 stems at one cutting. When seeding broadcast, the seed should be covered with a light smoothing harrow or with a brush drag. The majority of farmers seem to prefer broadcasting, presumably because they have less difficulty in getting the plants covered shallow enough than with a drill. The majority of grain drills are not properly manufactured to admit of the nicety of adjustment necessary in seeding grass seeds.

**HAYING.**—In harvesting mow down as much of the crop at once as can be handled in one day. Let it wilt in the swaths and then rake it into windrows to cure. If the weather is fine, it can be stacked from the windrow by using a sweep rake and stacker. If the weather is threatening, bunch the windrows and cock the bunches to allow it to finish curing. It should be put into the stack with just as little handling as possible. To avoid molding, I have advised farmers to store alternate layers of dry straw and fresh alfalfa hay together in the barn or stack. The straw need not form more than about one-fourth of the total weight. I think this method especially applicable to the first crop in localities where old straw stacks can be easily acquired.

When possible, alfalfa should be stored under a roof, as it does not turn rain well. A cheap hay shed can be built by setting telegraph poles in the ground, braced by two-by-sixes, and putting a good shingle roof on the structure. The sides should be left open and the hay stacked under this shed in ricks. A stacker of some sort or other should be used, as it does not pay to hire men to handle the hay with a fork. They waste too much by shaking off the leaves, which are considerably better to feed than wheat bran, pound for pound. Where a roof cannot be had, the hay should be stacked in high, narrow ricks covered with long slough grass.

Alfalfa should be cured and stacked, is possible, without being rained upon. No other crop is so easily injured by rain. Alfalfa hay rained upon is worth about half what it would be were it unexposed.

Harvesting alfalfa at the right time and in the right manner very largely determines its feeding value. The majority of farmers wait too long before starting the mowing machine. Alfalfa should be cut for hay when one-fourth to one-half of the blossoms have opened. When let stand longer, many of the leaves fall off and are wasted. Mowing early stimulates the growth of the following crop. Allowing it to go to seed seemingly exhausts the plant for that season.

**FEEDING.**—Alfalfa fed green, either as a pasture or as a soiling crop, has few equals in its nutritive value. In localities where there is no difficulty in getting a stand, the cheapest way to feed it is probably to pasture it. It should never be pastured until the plants are more than a year old. Owing to their liability to bloat or bloating, it is always risky to pasture cattle or sheep upon alfalfa. Before turning animals liable to bloat upon the alfalfa give them all they will eat of some other food. Death from bloat is often very sudden.

#### Seed Testing at the University of California.

A writer for the Oakland Enquirer has prepared a readable sketch of a line of work which one of the young women students at the University has taken up. It will be interesting to our readers. The work consists in the scientific testing of seeds as to purity and germination, and the pioneer in this State is Miss Alice F. Crane, a student in the agricultural department of the University of California. In Germany such tests have long been in use, owing to strict laws regulating the quality of all seeds placed on the market; and in the East seed bureaus have been established at many of the agricultural experiment stations. On this coast testing has been entirely neglected until Miss Crane, hoping to make remunerative the scientific knowledge which she has secured in her advanced studies, ventured pluckily into the new field, and found that a long-felt want was met.

So important is Miss Crane's work considered that not only do Profs. Hilgard and Wickson give her their endorsement and recommendation, but all her experiments are conducted in the laboratories and with the apparatus of the agricultural college. The demand for tests, which at first was small and confined to the large seedsmen of the coast, is rapidly spreading, as their value is learned and appreciated, and now includes farmers and planters in considerable number.

The packages of seeds to be tested are mailed to Miss Crane at the agricultural building. If germination tests are desired, they are divided into hundreds, and each hundred planted under favorable conditions. Some are planted in the ovens of the agricultural laboratory, where they are kept constantly at the most favorable degree of moisture and temperature; others are planted in the greenhouse and still others in the open air. The soil is first sterilized to kill foreign seeds and all precautions taken that mould, insects or other enemies shall kill none of the germs. The number of sprouts under these conditions is then counted, an average of the

whole taken and the result is the proportion of fertile seeds in the package submitted.

If the test is to be for purity, the proportion of sticks, dirt and other useless matter is determined by weight. Weed seeds are then eliminated and identified and the kinds and proportions reported to the sender. Many farmers submit seeds for purity tests in order to learn whether the variety which has been sold to them is the one desired.

The value of tests such as these is apparent at once. By having a sample of seed tested at a nominal cost, the farmer may be saved the planting of an entire crop in vain. If, after germination tests, the seeds fail to grow upon being sown, the planter will know whether the seeds or other conditions are at fault. By the purity test the farmer may know whether his seeds are true to name and whether he is perhaps planting dangerous weeds along with the crop. It was in this way, by being mixed with flax seed, that the noxious Russian thistle was introduced into this country. Alfalfa seed on this coast is frequently mixed with dodder, the presence of which only the microscope will show. Sugar beet seed is found mingled with wild morning glory, and most other seeds have their accompanying pests.

As was stated, there are no laws in this country such as exist in Germany to regulate in any way the quality of seeds placed on the market. The leaders in scientific agriculture are anxious to secure the passage of such laws, and in this endeavor they have the entire support of all reputable seedsmen, who by this means would be protected against the dishonest competition of unscrupulous firms. In the absence of such laws, with accompanying government tests, Miss Crane and her instructors are enthusiasts upon the subject of scientific seed testing to guard against deception and impurity.

### THE APIARY.

#### Substitutes for Pollen.

By PROF. C. P. GILLETTE of the Colorado Experiment Station, Fort Collins.

It is a well-known fact among bee keepers that bees can be stimulated to early brood rearing in spring by putting out some kind of finely ground meal or flour, which they take as a substitute for pollen. Writers vary in their opinions as to what is the best, but it is commonly recommended to use rye, oats, or pea meal. Common wheat flour, wheat middlings, corn meal, barley meal, and malt all have their advocates. It was thought best to put out at one time a good number of these substitutes for the purpose of determining which would be given the preference by the bees. To do this a number of boards were laid flat upon the ground in the vicinity of the apiary, a small pile of each kind of meal put upon them and notes taken upon the results.

It was found that any of the substances used would be taken freely when used alone. Also that the preference did not always go to the same feed.

Results with the first series of tests were published in the seventh annual report of this station. As that report did not reach a large number of general readers, and as subsequent tests lead to some change in the order of preference, I have thought it best to report upon the work again here. The order of preference as nearly as could be judged ran as follows: Ground whole kernels of oats, corn, and wheat, fine wheat bran, bran (ground over so as to be fine), cleaner dust (waste dust and chaff as taken from cleaners at flouring mill), cottonseed meal, wheat bran, pea meal, wheat flour, rye flour, bean meal, barley meal. The three last named they would hardly touch as long as others were accessible.

As pollen furnishes the bees with nitrogenous food, it seems probable that those substitutes for pollen that have most nitrogen or, rather, that furnish the chemical compounds most nearly in the proportions that they are found in pollen, would be best suited to take the place of pollen in the dietary of the bee.

In order to determine whether or not the chemical composition of the foodstuffs best liked by the bees were more like the composition of pollen than the others, I had a quantity of corn pollen collected and taken to Dr. W. P. Headden, station chemist, for analysis. In the table below the first analysis is that of corn pollen made by Dr. Headden, and the analyses of the other materials are compiled:

Name.	Water.	Ash.	Crude Fiber.	Fat.	Protein.	Nitrogen Free Extract.
Corn pollen..	3.444	5.039	7.970	1.526	19.598	62.423
Oats ground.	9.3	3.5	8.5	3.6	11.4	63.7
Corn "	13.6	1.4	1.9	3.4	9.6	70.1
Wheat "	11.5	2.0	2.9	2.0	12.1	69.5
Wheat bran	11.0	5.7	10.4	5.0	15.9	52.0
Cottonseed meal.....	8.0	6.9	6.7	10.0	42.0	25.7
Pea meal....	8.8	2.6	17.7	1.6	19.2	50.1
Wheat flour.	12.6	0.7	0.7	1.2	11.8	74.1
Rye flour....	14.0	1.6	1.5	1.6	10.5	72.5
Bean meal..	12.0	1.4	2.1	8.5	11.0	65.0
Barley meal.	13.1	2.4	5.7	1.9	11.3	65.6

It will be noticed that while the nitrogenous material (protein) is high in the pollen, it is not very high in some of the flours best liked by the bees, as for ex-

ample, corn and oats. Cottonseed meal runs very high in protein and was not specially liked.

So there are, doubtless, other reasons than the amount of nitrogenous food material that influence the bees to take substitutes for pollen. It is probable that the aroma and mechanical qualities have much to do in determining their choice. There is nothing very definite in the above order of choice of the different foods used. The order will often vary on consecutive days, or even on consecutive hours.

It is by no means certain that the flour the bees like best is best for them, for this manner of supplying them nitrogenous food is entirely artificial. The best substitute for pollen is that food which the bees will take and upon which they do best, and it seems probable that it will have a chemical composition approximating that of natural pollen.

**ANNOUNCEMENT** that William Forsyth of Fresno had purchased the entire crop of the Butler vineyard created a sensation at the raisin center. It is stated that the price paid was \$35,000 for the product of 580 acres, estimated at 3800 tons. It is generally believed that in the transaction is involved a seeding proposition, which is outside the association. However, it is thought that the deal will not affect the price of raisins in the immediate future.

### MISCELLANEOUS.

It would take 3,138.97 feet of 1-inch rope to wrap a pole 100 feet high, 1 foot diameter at the bottom, 6 inches diameter at the top.

As a water column 1 foot high exerts a pressure of .43 pounds per sq. in., a pressure of 3.97 pounds per sq. in. represents a head of 9.2 feet.

The highest point reached by any railway in the world is at the Galera tunnel—15,678 feet—on the line from Lima to Oroya, Peru, South America.

WORK on the four restraining barriers in the Yuba, Cal., river, for which \$500,000 is appropriated and available, will begin when the necessary land is under Federal control.

**ELECTRIC PUMPS**—that is, power pumps direct connected and driven by an electric motor—work successfully in innumerable instances, delivering from 500 to 20,000 gallons per hour.

A **BULLET** fired at 45° elevation is supposed to travel through the most space—that is, of three of the same weight, fired with the same force and under similar circumstances, one horizontally or any angle but 45°, one perpendicularly and one at 45°, the latter would have the longest trajectory.

**GREEN WOOD** when cut down contains about 45% of its weight in moisture; kept for several years in a dry place it will retain 15%; if thoroughly dried, it will, if exposed to air under ordinary circumstances, absorb 5% of its weight in water the first three days and continue absorption till it reaches about 15%.

**PERMANGANATE OF POTASH** is an antidote for the bite of a rattlesnake or other venomous reptile. To use it the wound should first be enlarged and then saturated with the drug, after having first tied a shoestring, suspender or some handy ligature around the limb, as the leg or arm is usually the point attacked.

In measuring a miner's inch of water, the surface of the water is to be exactly 6 inches above the center of the discharge. If the aperture be 2 inches in height, each sq. in. of the opening in the plank (1½ inches thick) will discharge a "miner's inch" = .02499 cu. ft. per second, 1.4994 cu. ft. per minute, 89.964 cu. ft. per hour, 2159.146 cu. ft. per day of twenty-four hours.

It may be that S. J. Carrigan of Northfield, Minn., has discovered the existence of three hitherto unknown planets between our earth and the sun, "each of which is heading for us and sure to destroy this planet," but the fact is not generally known. It really, however, makes little difference. Probably if this planet were totally destroyed we could all get along just as well without it.

The degree of cold on high Sierra peaks is a matter of record. A self-recording thermometer was left on the summit of Mt. Lyell, 13,041 feet high, during the winter of 1897-98, so placed as to be free from snow. The lowest temperature reached was 13.6° below zero. In the winter of 1898-99 the experiment was repeated, and the record when read the following summer showed 17.6° below.

An applicant at a U. S. land office to secure timber land must swear to a non-mineral affidavit. He must take oath that he knows the conditions of the land at that time by personal observation; that the land is not occupied by any person or persons; that there are no mining claims, lodes or mineral deposits, to his knowledge, on said land. Coal, salines and coal oil claims on a tract of land exclude it from entry as timber land.

The **Mausor rifle** is not considered equal to the Krag-Jorgensen. The main difference between the two is that while both are bolt guns, the Krag has a magazine which, filled with five cartridges, can be cut off so as to make the rifle practically a single shooter; the Mausor's magazine can not be so cut off. Then, in the Krag, the bolt is opened and closed by the action of cams; in the Mausor the user has to compress the main spring by direct force.

"A 10% GRADE" means a rise (or fall) of 10 units of length in a distance of 100 of the same units of length, the rise (or fall) being measured vertically, and the distance horizontally. If the unit of length is 1 foot, a 10% grade means a rise (or fall) of 10 feet in 100 feet; in the same way it may mean a rise (or fall) of 10 rods in 100 rods, or 10 miles in 100 miles. A 10% grade in feet to the mile would be a vertical rise (or fall) of 528 feet in each mile of horizontal distance.



## Agricultural Review.

### HUMBOLDT.

**CUT WORMS.**—Arcata Union, July 28: Cut worms are causing farmers on Arcata bottom a great deal of annoyance and in some instances are doing much damage. They are the common large grey cut worm, and seem to do most damage in the night, disappearing under ground in the day time. They are eating the leaves off the beets, but where they have attacked pea fields they have destroyed most of the crop. Those who have tried it claim that sulphur or lime does not have any material effect towards stamping out this pest.

### LASSEN.

**HONEY LAKE BASIN.**—Susanville Advocate, July 26: The first report of the Water and Forest Association in co-operation with the U. S. Department of Agriculture and Geological Survey is approaching completion. It is being written by W. Smythe and appertains to Honey Lake basin. The engineering work was done by Prof. J. M. Wilson, State Engineer of Nebraska, assisted by A. Halen, C. E., and W. D. Minckler, C. E. Detailed maps are being prepared to accompany the report. The county records were searched for a complete list of appropriations and some interesting facts were disclosed. Among others it was found that the total appropriations in that valley reached the imperial figures of 28,630,932 miners' inches—water enough, it is said, as used in southern California, to irrigate 229,047,456 acres. The fact is given as a typical instance of the reckless appropriations made under existing laws. The report make a study of the California law and decisions based upon it as illustrated by the experience of Honey Lake valley, and then contrasts this law with those of other States and countries. It is believed the report will command wide attention and carry much weight in favor of the reform of present water laws and the provision of new ones suited to the needs of the growing irrigation industry.

### LOS ANGELES.

**ANOTHER FRUIT EXCHANGE.**—Pomona Progress, July 26: A special meeting of the Indian Hill Citrus Union stockholders was held to take action regarding the formation of a separate corporation at San Dimas. It was unanimously voted to do this. One manager can hardly take care of the business at both places. There was discussion regarding a separate corporation to handle lemons, the idea of many members being that Claremont would be the best location for this new concern, but no action was taken on this matter.

### MONTEREY.

**WILL ENGAGE IN DAIRYING.**—Watsonville Pajaronian, July 26: The Spreckels Sugar Co. is going into the dairying business at King City on a large scale. Alfalfa grows richly on the irrigated lands of the company at that point, and experiments which have been made satisfied the company that dairying can be made a most profitable business at that point. It is intended to have about 2000 cows on the place. Heavy purchases of dairy cattle have been made. The sugar beet has not shown much affection for the soil of the southern Salinas valley, and we hope that alfalfa growing and dairying may prove a bonanza to the people who have spent so much and who have waited so long for paying returns.

### SAN BERNARDINO.

**APRICOT SEASON CLOSED.**—Chino Champion, July 20: The East Side Fruit Association finished cutting apricots last Saturday, having been at work twenty-three days. About 200 tons of green fruit were cut, the most cut in any one day being twenty-four tons. During the season there were as high as 150 cutters and twenty-five men employed and the total paid out for wages aggregates about \$2000. Yesterday the last of the fruit was out of the yards. Manager Monro says he has not yet made up the accounts to tell the exact cost of handling the fruit through the exchange, but he believes the figures will show it to be lower than when the work was done by individuals. The fruit will be sold through the central exchange and the prices cannot be foretold. The association has been offered 6 cents for its fruit, but was not at liberty to sell.

### SAN JOAQUIN.

**FIRST CAR OF WATERMELONS.**—Lodi Sentinel, July 28: The first watermelon shipment of the season from this place was made yesterday. The melons were sent out by George Hogan and were of excellent size. The number—about 1200—made a scant carload.

**SHIPPING SUGAR BEETS.**—Lodi Sentinel, July 28: Sugar beet harvest has commenced and fair crops are the result. This is a better showing than was ex-

pected. The first car is now loading here, the beets being from the Carter ranch. In size the saccharine vegetables are very good.

**GRAIN ESTIMATE.**—Stockton Record: J. J. Agard, a well-known insurance man, who travels over all sections of the State, has prepared an estimate of the grain crop. According to his figures California will produce this year 650,000 tons of wheat and 300,000 tons of barley. The various grain centers and valleys are credited with this yield of wheat: San Joaquin valley, 350,000 tons; Sacramento valley, 150,000 tons; Salinas valley, 100,000 tons; Colano valley, 50,000 tons. He considers Stanislaus the banner wheat-producing county this year and places the wheat yield there at 90,000 tons.

**NEW FEATURE IN GRAIN WAREHOUSE.**—Stockton Mail, July 25: The new warehouse of the California Navigation & Improvement Company is now ready for occupancy and grain is beginning to go into it by the car and wagon load. The structure is of galvanized iron, over a wooden frame, and sits on concrete piers. The building is 300 by 120 feet and has a capacity of between 11,000 and 12,000 tons. The structure is well ventilated and cool. The floor at the present time is planked over a 7-foot fill of sand. It is proposed to allow this to settle for about two years, after which a cement floor will be put in. There is quite an innovation in the construction of this warehouse. Instead of being built to the roof the side walls go up part way only, the rest of the space—5 or 6 feet—being filled in with wire mesh, to increase the ventilation. The overhanging eaves protect the grain from the weather. Numerous openings in the side walls are provided so that any portion of the stored grain may be reached at any time. The structure cost about \$12,000.

### SANTA CLARA.

**FIRST CAR OF DRIED APRICOTS.**—San Jose Mercury, July 28: The apricot harvest at Campbell is nearing its close, but other fruits are coming in rapidly, so that very little change will be noticed in the cannery and drier. These institutions are both operating with a full force of hands. Peaches have commenced to arrive and some pears have already been received at the cannery. The Campbell Fruit Growers' Union shipped its first carload of dried apricots yesterday of this season's pack. It was sold to a dealer in Cleveland, Ohio. The price received is considered very satisfactory.

**SEED HARVEST.**—Mercury, July 30: The seedsmen are actively at work harvesting their crops. They will commence operations on onions to-morrow. In some places the crop is light, especially with onions, which appear to be suffering from a blight. The work will be pushed forward rapidly and the shipments to the East will commence in a short time.

**APRICOT PITS.**—Pacific Tree and Vine, July 21: Apricot pits are now worth \$8 per ton. Care should be taken not to get any fruit mixed with them, and they should be spread in a thin layer until so dry they will not mould, when they may be shoveled into a large pile. Mould hurts the sale of them. As near as we can learn some one is making a good profit on them and the price should be at least double what is paid. Well-cured apricot pits are as handsome as almonds, and it takes a large pile for a ton. We have heard that some are bleaching them to further improve their looks.

### SANTA CRUZ.

**SPARKS' MAMMOTH 'COTS.**—Watsonville Pajaronian: Clarence Bowman of Pleasant Valley has apricots this year from his Sparks' Mammoth trees, which are immense in size and choice in flavor. The Sparks' Mammoth is an excellent 'cot to eat out of hand, but seems to be a bit soft for carrying.

**'COT DRYING ALMOST FINISHED.**—Watsonville Pajaronian, July 26: 'Cot drying is getting along toward a finish. The crop is the heaviest ever grown in this valley, and about all of it will be marketed dried.

**APRICOT PITS.**—Watsonville Pajaronian, July 26: The Chas. Ford Co. have contracted for the pits from over 1500 tons of green apricots. The pits are dried, sacked and shipped to San Francisco. The kernel is used in making certain kinds of fancy candies, and contains a valuable acid. The Ford Co. is paying \$6 per ton for the pits and furnishes the sacks.

**APPLE CROP.**—Pajaronian: The apple crop of Pajaro valley this year promises to be the largest ever gathered in this district. The Bellefleur crop will be the heaviest for several years, and the Newtown yield will be unusually heavy. One of the most conservative packers estimates that Pajaro valley will have this year not less than 1000 cars of good fruitier stock, and that the total crop for shipment will run to 1500 carloads, or 1,000,000

boxes. A large acreage of young orchards has come into good bearing this season, and the improved showing in the Bellefleur yield is largely found there. Heretofore at this time of the season a large portion of the Bellefleur crop has been contracted. It is not so this year. Packers would like to see the demand and prices for Bellefleurs as good as they were last season.

**APPLE ORCHARDS VALUABLE.**—Santa Cruz Surf, July 26: From testimony taken before the Board of Equalization, it was shown that the crop on an orchard of thirteen acres of apple trees ten and twelve years old had been sold for the years 1900 and 1901 for \$4600. The owner prunes the orchard at a cost of about \$10 per acre and hauls the fruit to the warehouse. Some years it is necessary to spray the trees to destroy insects, and this will cost from \$200 to \$300 for an orchard of this size.

### SOLANO.

**ALFALFA HAY CROP SHORT.**—Dixon Tribune: Our ranchers are apt to get a good price for their hay after all, as the crop of alfalfa hay on the river is short this year, and the price is tending upward. Good, sowed grain hay is all that is wanted and volunteer stuff is not in demand.

### SUTTER.

**GROWERS DRYING FRUIT.**—Farmer, July 20: The fruit growers in this section are becoming largely independent of the canners, particularly as to all drying varieties of fruit. In almost all the orchards one can find complete drying outfits and commodious cutting sheds. The growers have also learned how to prepare and cure the fruit properly. Those who have tried Chinese renters have found that plan unprofitable. Growers prefer to sell their fruit green but they are ready to dry their product when necessary. Many new yards have been equipped this season and all of them are now beginning work in earnest.

**CANNERY DEAL.**—Yuba City Farmer, July 27: Last Monday announcement was made at Hunt Bros.' cannery that the affairs of that institution would be conducted from that date under the management of R. W. Skinner, who has charge of the Marysville and Lincoln canneries, the general inference being drawn that the canning interests of this part of the State are now under the control of the Cannors' Association. The growers' contracts are not affected at all. Many now are being accommodated considerably by being allowed to deliver their fruit here instead of in Marysville. Mr. Skinner, the new manager, is well known to growers, being considered one of the best cannery men in the State, and he will no doubt endeavor to do the right thing by all.

### STANISLAUS.

**ALFALFA DON'T BLOOM.**—Newman Index: Alfalfa is growing well and making excellent hay, but does not bloom, as the grasshoppers and ladybugs destroy the buds before the blossom puts forth.

**DESTROYING PEACH CROP.**—Oakdale Leader: W. F. Wheeler, the nurseryman, stated that his apricot crop was reduced one-half by the destruction wrought by the so-called ladybugs; that his crop would have yielded ten tons when dried, but he would not get more than half that amount, owing to these destructive pests. We made a visit to the orchards near the river on Monday and found that the pests were still at work, but had made a change in their diet. They are now making an attack upon the early peach crop. It is probable that the greater portion of this crop will be destroyed, as it is not so abundant in this locality as was that of the apricot.

**COW MILKED BY A PIG.**—Modesto Herald: Jno. Murphy had been puzzled for some time to account for the sudden falling off in the milk yield of a fine cow. There was no apparent good reason for the marked diminution of supply, and "Bossy" would very likely have gone to the butcher had a little maid of the family not discovered the solution of the problem. Running breathless into the house one day lately, the child cried out that "the pig is sucking Bossy!" The child's announcement was confirmed. Sitting on his haunches, the partly grown pig was sucking the cow, Bossy contentedly chewing her cud. Piggy is dead, and the cow is once again contributing satisfactorily to the needs of the family.

### TEHAMA.

**BARLEY CROP.**—Red Bluff News, July 18: The new barley crop is coming in fast and in Cone & Kimball Co.'s warehouses are already stored about 6000 bags. Twelve farmers have their grain on allotted floor space and room for 26,000 bags has been engaged; 500 to 600 sacks are being brought in daily.

**SALE OF SHEEP.**—Red Bluff News, July 26: E. H. Ward, Jas. Cotton and J. H. George have returned from Cone &

Ward's sheep range in the mountains, where they selected 5300 head of mutton sheep from the band. These sheep were sold to Messrs. Cotton and George by Cone & Ward under a contract of time purchase made several months ago. The sheep are a fine lot of ewes and wethers, and brought \$3 per head for the ewes and \$3.50 for the wethers. They are now on the road down and are expected to reach the Cone ranch in about eight days, where they will be separated, each of the buyers taking his share to ship to different markets.

### YOLO.

**HALF A CROP OF WHEAT.**—Woodland Democrat: The wheat harvest has progressed far enough for those whose experience enables them to make a reliable estimate to form a definite idea as to the amount and quality. All the buyers say shrunken wheat is the rule, and the majority of farmers say a half crop is the best that can be expected.

**ALMOND GROWERS SELL.**—Davisville Enterprise: The Davisville Almond Growers' Association have sold this season's crop for a splendid price—the best that has been paid for almonds for many years. Ernest Luehning of Suisun was the successful bidder, paying 12½ cents a pound. It would seem that the grower has this season obtained somewhere near the price he is entitled to receive for his product, also the successful bidder—Mr. Luehning—is well pleased with his buy. Other competing bidders, on the opening of the bids, offered to raise Mr. Luehning's bid, but were informed by the association that the time had passed for bidding and that they could not consider any further offers after the sealed bids had been opened. The prospect for the almond growers of California is surely very bright.

### YUBA.

**WORKING NIGHTS AT THE CANNERY.**—Marysville Appeal, July 23: Over 700 operatives are engaged at the cannery, and Manager Skinner announces that he has a place for all the women and girls he can secure. Work for men is somewhat scarce, and will continue to be so until later, when box making starts up. The present force are compelled to work nights in order to get away with the large amount of fruit which is arriving daily.

**NEW CREAMERY.**—Yuba City Farmer, July 27: President Heilmann, of the Marysville Ice & Cold Storage Co., has announced that he will put in machinery to operate a creamery in that city this fall, and would like to start out with the product of 400 cows in the two counties. Mr. Heilmann will pay for the butter fat contained in all milk delivered at his place of business 1½ cents less than the market price of butter at the time the milk is given into his possession. The skimmed milk, which will be Pasteurized, will be returned to the patrons, and will be found to make a most healthy drink for hogs and young calves.

**HOP CROP.**—Wheatland Four Corners: The hop harvest season is near at hand. In many of the yards full-grown hops can be found, and all vines are blossomed out and rapidly forming hops. Hop men figure that picking will begin about the 15th or 20th of August. While the Bear river crop will be light this year, the vines are clear of underbrush and the berries firm, making excellent conditions for the picker.

### NEVADA.

**CROP REPORT.**—U. S. Crop Bulletin, July 24: Harvesting hay and grain continues under favorable weather conditions, and with indications of more than an average yield in most sections. Many think that alfalfa will not produce a second crop, especially where it was cut late and not irrigated. Wheat, barley, rye and oats are ripening very fast and look unusually promising. The third crop of alfalfa is being cut in the southern portion, and the harvesting of wild hay is general. Corn and potatoes are doing well; borries and vegetables continue plentiful in the markets; water is getting very low for irrigation, and the ranges are rapidly drying up.

### ARIZONA.

**PALMS FROM ALGERIA.**—Tucson, July 19: A carload of 450 date palms, including specimens of all the best varieties known in northern Africa, just imported by the Department of Agriculture, was received by the Agricultural Experiment Station here last Monday. The palms left Algiers on June 11th, coming by way of New York and New Orleans, the Southern Pacific shipping them from New York free of charge. The palms will be thoroughly fumigated under personal supervision of Prof. R. H. Forbes, director of the Experiment Station. They will then be set out in the government date-palm orchards at Tempe, where there is already a number of the plants in flourishing condition. In about three years cuttings from these plants will be available for distribution.



## THE HOME CIRCLE.

### The Promise of Morning.

O'er the horizon, through cloud rifts,  
The sun god peeps before he lifts  
The curtain of the skies;  
Like candles after some great feast,  
The stars die out, and in the East  
The shadows slowly rise.

Kissed by the sunshine, washed with rain,  
The face of Nature smiles again,  
The brooks laugh as they flow;  
The leaves appear, and blossoms white  
Clothe bush and tree with raiment bright,  
A drapery like snow.

The sun dissolves the misty veil,  
Which, rising, leaves a shining trail  
Behind of silver thread;  
And dew drops sparkle like rare gems  
That glisten on queen's diadems,  
Or tears that angels shed.

The great orchestra softly plays  
An overture of joy and praise,  
A new day has begun;  
The birds in one grand chorus sing:  
"A thousand welcomes to the spring,  
All hail, life-giving sun!"

Like scods up-growing through the earth,  
Thus we must struggle for new birth,  
New growth, now life divine;  
The soul shall conquer death and gloom,  
And in eternal spring may bloom,  
Fulfilling God's design.

—Munsey's Magazine.

### The Farm in Summer.

In all the world I do not know  
A scene that stirs the wanderer so;  
In all the world I have not found  
A rarer joy, a holier ground  
Than this, with all its wholesome charm—  
The summer homestead and the farm.  
Once more is ours the proud delight  
To look upon the thrilling sight  
Of nature's richest offerings,  
Of fields astir with growing things.  
The ample farms, afar and nigh,  
Their songs of plenteousness reply,  
And hillside across, everywhere,  
Echo the valleys, green and fair.  
The fields the farmer's might display,  
For summer is his working day;  
Whatever reaping days may bring,  
To-day he is the summer's king.

—Country Gentleman.

### "Unconditional Surrender."

Clarissa was absurdly unreasonable! Even grandfather, who adored her, was forced to admit that. Aunt Frances used to shake her dear white head, and sigh mildly. "The child has stayed abroad too long," she would say. "Her brain is filled with old-world notions. Conditions have changed, and America has grown to fast for her."

But when they attempted to remonstrate with Clarissa, that impetuous young person would get into a towering rage.

"Then there is no such thing as principle?" she would inquire, with withering sarcasm. "You didn't lose most of your property to the marauding Northerners! You weren't forced to come from your own dear Maryland to this cold, bleak New England! You didn't bring your slaves along, after you had freed them of your own accord, although most of them insisted upon remaining with you—to their credit! You're not my grandfather colonel because of your bravery at Antietam! You didn't sacrifice your only son, my father, to the lost cause! His death didn't kill my grandmother and my mother! Oh, no! I must have dreamed it all!"

"My dear! my dear!" grandfather would remonstrate, sadly. "God knows I acted as I thought best; perhaps I was mistaken. But conditions are changed, and it is the part of wisdom to conform to them."

"But the principle remains the same, grandfather!" would be the proud response; and Clarissa would weep a few obstinate tears upon the silky hair of Ffine, the French poodle which she had brought from abroad, and which, all told, was a most detestable little beast. "Ffine, darling, we belong to the Owings family of Maryland, don't we, pet? And what do we think of the Star Spangled Banner?"

and then Ffine would snarl and whine viciously, while her pretty mistress caressed and encouraged her.

Grandfather was distressed, but he was forced to smile at the absurdity of it all. "To be a rebel has gone out of fashion, my dear," he would say, deprecatingly; but Clarissa continued to regard herself as an alien, to heap fresh flowers daily before the picture of her beloved Winnie Davis, as before a shrine; to quote Father Ryan's stanzas upon the Lost Cause, and to deify the Lees and other heroes of the Confederacy.

She was twenty-three now, and she had been at schools in France and England since she was twelve, shortly after her father's death, and that of her mother, which quickly followed. As Aunt Frances said, America had grown too fast for her.

There had been many changes in the neighborhood during her absence. On what had been Grandmother Owings' old-fashioned flower garden a handsome dwelling had been erected, and the two families used the dividing driveway in common. Down this driveway, several times each day, an athletic young man was wont to go, laden with golf sticks, riding a wheel, armed with gun or fishing tackle, or erect upon the back of a spirited black horse, which from the first had been Ffine's especial detestation. As in another celebrated and classical case, the neighborhood caused their acquaintance in the first steps of love. Even England and France could produce no more splendid specimen of manhood than was Robert Hale, as Clarissa was forced to admit to her unwilling self.

Perhaps that was why the winter which followed her home coming proved such a pleasant one. As the weeks went by there was joy in both households over the very evident interest which the young people took in each other. They were not aware of the plans for their future which Aunt Frances so frequently discussed with Robert's widowed mother. In fact, they were not conscious of much beyond their joy of living, of propinquity, of the sympathy and understanding which existed between them, of a community of tastes and interests. Together they marveled at the miracle of life through death, in opening bud, and leaf, and flower; but so far no word of love had been spoken between them. They were young; there was no need of haste. It was the springtide of life, as well as the springtide of the year. But

Hard if these  
Found not a way to show their secret  
each to each;  
And so they did;  
And one heart's flower dust into the  
other slid.

That Clarissa, imperious and exacting with all others, should be sweetly submissive to him was, in itself, the most subtle flattery. When Robert Hale heard her opinions and comments upon the cause of a contest which was fast becoming merely a tradition, he only smiled indulgently, lenient to them, as he would have been lenient to any whimsical fancies on the part of the woman whom he loved.

The first clashing of their wills came late in the spring, when Robert was offered and accepted the office of captain of the new organized company of Sons of Veterans. He was surprised and amused at the imperiousness with which Clarissa drew herself up, proud as another Juno, and condemned his action.

"No man could offer me a more deadly hurt!" she announced tragically. "My father was wounded at the battle of Belmont. Those wounds ultimately caused his death. Who knows that your very father wasn't the Northerner who shot him!"

"And my father was wounded at Petersburg," was the solemn response. "For the rest of his life he went around with only one arm. It seems like your father might have fired the very shot which deformed one of the handsomest men that ever lived."

She knew that he was purposely mimicking her affected use of the Southern like; but she would not un-

bend. He leaned his arm over Black Don's glossy neck, and regarded her mischievously.

"What an irony of fate, Clarissa!" he said teasingly, as he stood gazing at her with a fondness which she heartily ignored. "However did it happen that you should have blue eyes, while mine should be gray?"

As Memorial Day approached, however, the breach between them grew undeniably serious. The older members of both households smiled and shook their heads knowingly, and moralized on the inevitableness of lovers' quarrels. Aunt Frances rashly took it upon herself to remonstrate with her niece, for Robert was her special favorite, and she could not bear to have him made unhappy by Clarissa's caprices. She was unprepared, however, for the rebuff which she met.

"Please don't ever mention Mr. Hale's name to me again, Aunt Frances. I have found him out—an advantage which I appreciate. Better to know his faults now than when it might be too late!"

But Clarissa was by no means happy in what she glorified as her adherence to principle. She was fearfully and pathetically lonely and she tried not to hear when the black horse and his rider dashed down the driveway on their way to the drills and parades, which became so frequent with the nearness of Memorial day.

The misunderstanding had deepened now; for there had been other and bitter words, and each studiously avoided looking in the direction of the other when they met, which was but rarely.

Fair as a garden of the Lord was the country side upon the morning of Memorial day; but Clarissa could see no beauties in nature as she moped in the sewing room which overlooked the driveway, confiding her unhappiness to petted snarling Ffine.

Out at the stable the groom was putting the saddle on Black Don—for the coming parade she knew; and presently Robert appeared at the side door carrying a flag which he proceeded to run up the staff on the barn.

"How handsome he looks in his uniform," the girl meditated with bitterness, as she peered through the sash curtains in jealous inspection of his every movement. "Horrid thing! It wouldn't hurt him to at least glance in this direction!"

But Robert was evidently too busy; and it irritated the watcher as he began to whistle softly, and then to sing in an absent-minded fashion, as he bent over a knot in the halyards:

There's just one girl in the world for me!

Oh, was she the girl? Clarissa asked herself feverishly, but there was no one to answer the question only Ffine, who yawned lazily and snapped at the lace upon her mistress' sleeve.

I could be happy forever with just one girl!

Robert kept on singing with cruel unction as he stood back and watched the folds of Old Glory unfurl, as they blew out from the masthead, catching the soft May breeze. Then Clarissa could bear it no longer. She buried her face in the couch cushions and found refuge in that relief for all feminine woes—a good cry; while Ffine, disturbed in her morning nap, whined dismally.

Such an exasperating day as it proved! There were bands and military companies, and everywhere the Stars and Stripes were flying. Grandfather was in bed, suffering from a new ache in his wounded shoulder—a memory of Antietam; and this furnished the girl a pretext for keeping all the shutters closed and making theirs the only dismal house along the avenue as the parade went by. With white face and set lips she hid behind the blind, and sadly followed with tearful eyes the erect figure of Captain Hale as he rode past at the head of his company.

"Oh, Ffine!" she murmured sorrowfully. "I always knew that he was proud. But at least he might have glanced at the house if not at me!"

It was evening when she heard him return. Black Don was proud though weary after the heat and confusion of the day, and turned slowly in be-

tween the high stone gate and posts of the driveway—and then, well, Clarissa never knew exactly how it happened; but of a sudden there was a mad rush of a little white bundle of silky hair from the porch, the defiant yaps and snarls of Ffine as she snapped at the black horse's feet, and Captain Hale, caught off his guard, had been thrown by the shying horse, striking his head against the cruel edge of the big stone post. That was the last of which Clarissa was conscious. Then, for the first time in her twenty-three healthy years, she fainted.

That fact remains yet her own inviolable secret, for nobody remembered her during the excitement which followed. After a time she "came to," and, athletic golf girl that she was, felt properly ashamed of her own weakness. Then it was that she learned the worst. Malicious Ffine had frightened Black Don, and Captain Hale was ingloriously lying on the library couch, with his right arm in splints, and an ugly gash upon his right temple.

"He must not die until he has forgiven me!" Clarissa cried hysterically to Aunt Frances, as she unceremoniously bundled her willing relative across the intervening driveway and the lawns to the Hale mansion, where all was sorrow at the mishap which had followed the glorious beginning of the day.

Clarissa expected reproaches from Robert Hale's mother, but instead she received a tender kiss and a caress, and two elder women considerably remained in the reception hall, while the penitent girl went half reluctantly into the library, where in the subdued light, she discerned the stricken hero propped up among sofa pillows on the couch—it must be confessed more prone to be profane, with all a strong man's impatience of pain, than to feel complacent over any hero worship which might fall to his lot.

But when he recognized Clarissa—ah, that was another story! And he was craftily moved to magnify his hurt and to work upon her tender sympathies, until—well, in a lovers' quarrel the angle of reflection is always equal to the angle of incidence. In an incredibly short time that wicked Robert had become surprisingly cheerful, especially since Clarissa's face was somehow very near his own, and his heart was melting to feel her tears upon his cheek, and she was softly calling him "dear," and whispering out her penitence.

He was amazed to hear her confess, sorrowfully, "I have been a wicked and an unreasonable girl! And to prove how repentant I am, Robert, I am—just—going—to—make—the supreme sacrifice for you!"

"Sweetheart! What?" he inquired in wonder.

"I—am—going—to—give—Ffine—away! That is, when I can find a good home for her, you know!"

Capt. Hale laughed, but only mentally.

"Not a bit of it, dearest!" he declared. "Why, I owe that little beast an unbounded debt of gratitude! She's brought about a victory bigger than—than—Gettysburg, Clarissa!"

This was a mischievous thrust, but the girl was too much in earnest to notice or resent it.

"A victory won by force of arms—or rather of an arm," the malicious fellow continued, doing yeomen service with the uninjured member. "You are mine, aren't you, you little rebel?"

Her tears had suddenly ceased to flow now, and she was smiling, though somewhat pathetically, and unlike the familiar, proud Clarissa.

"I suppose I must acknowledge myself vanquished," she sighed, "as my ancestors did! And that I must surrender!" she added, with no particular evidence of resentment or regret.

"Unconditional surrender?" he questioned, half believing her admission too good to be true.

"Unconditional surrender, Capt. Hale!" she replied submissively.—Springfield Republican.

A LAW recently passed by the Arkansas Legislature makes a woman who wears a stuffed bird on her hat liable to a fine of from \$25 to \$50,



### Cooling Water Without Ice.

When a native in one of the broiling hot little villages of interior Nicaragua wants to cool some water she fills a half gallon earthenware jar about two-thirds full. I say "she" because this is a task that requires more energy than any male Nicaraguan was ever known to possess. The jar is made of baked clay, and, not being glazed, is partially porous and soon becomes moist on the outside. Two leather straps are firmly attached to the neck, and seizing these in her hands she begins to rotate the jar swiftly in the air. The mouth is wide open, but centrifugal motion keeps the liquid from running out.

The average native woman is frail and listless in appearance, but the endurance which they exhibit at this sort of calisthenics is marvelous. It is about the same as swinging Indian clubs, and I am afraid to say how long I have seen them keep it up, lest you might set me down as a prize liar. Generally the lord and master lies down in one corner of their "jacal," or hut, smoking a cigarette and watching the operation languidly. When the woman thinks the water is sufficiently cool she stops with a dexterous twist of the wrist and hands him the jar. Usually he takes a gulp, growls out, "Moocha calora!" which is the native patois for "blamed hot," and she begins again, patiently describing pin-wheels. I have never made a test with a thermometer, but I assure you they can reduce tepid water to the temperature of a very cool mountain spring.

### Discard the Corset.

The corset has been relegated to obscurity by many of the most fashionable young women of Philadelphia. Mme. Goches Sarrante, who believes that women wearing the evil, unhygienic thing should be punished by law, has rallied a host of followers around her flag.

Led by Dr. Grace Spiegel of the normal school, many of the younger girls are banding together against this article of feminine wear. They consider it not mildly unhygienic, but actively harmful. Dr. Spiegel's opinions on the question are:

"It is really wicked for women, and especially growing girls, to force themselves into such straitjackets. They need free play of muscles to give them the best physical and mental health; they need loose clothing to allow free play of muscle. No need, as some think, of a girl looking untidy because she does not wear corsets to deform her natural figure. She can be neat, carry herself properly and feel happier without them."

"Wu Ting Fang, the Chinese minister, puts the wearing of corsets on a par with foot-binding," said a member of the Society of the Philadelphia Woman's Medical College. She knows, because she has been assisting in the entertainment of the distinguished foreigner during his recent visit to that city. "In his address to our alumnae," continued this medical woman, "he cited the Chinese dress as one mark of the emancipation of the women of his country and their superiority over Americans."

### Citizen of Husband's Country.

American women can no longer marry foreigners and paint pictures and expect to bring them into this country free of duty. This is one of the latest rulings received by the Chicago collector of customs. The United States government holds that a woman who marries a foreigner becomes a citizen of her husband's country, and is not entitled to the privileges enjoyed by citizens of the United States in this or any other particular. This Government does not propose to prohibit marriages with foreigners, but American girls who go outside of the republic for husbands cannot expect to eat their cake and have it, too.

A KANSAS philosopher observes that a man doesn't object to telling his wife often what he likes to eat, but he thinks the fact that he told her ten

years ago that he was fond of her should be sufficient for to-day. That cynical comment is not true of husbands only.

### The Care of Books.

Never allow dust to collect on your books, for it is an insidious enemy and soon makes the very finest covers look dingy, states Mary Porter Langley. Never dust books carelessly. One of the best things is a fine piece of silk-lene, or a very soft, clean old silk handkerchief. A new one would not take up the dust. To dust a book it should be firmly grasped in the left hand and held by the center of the back, then the cloth rubbed along the edges and sides. The bulk of books, of course, are kept in cases, like encyclopedias, books of reference and a miscellaneous collection of large, heavy volumes. But in the days of voluminous literature and very reasonable prices, books accumulate in every corner in a comparatively short time, and those lying about need more care than their companions in cases. Books kept in cases should not be pressed too tightly together. Enough space should be allowed so that they do not rub each other, or are rubbed out of shape. A little room is also needed for ventilation. Again, they must be put in close enough that one supports the other, or they wobble, lose their shape and the backs loosen. Books which have light and air do not get musty and yellow-looking as quickly as those shut up in the dark.

I heard a housewife recently boast of having burned up four bushels of books at the time of her spring housecleaning. To be sure, it was all light literature, but good of its kind and containing much innocent entertainment for leisure hours. Yet these were ruthlessly sacrificed when they might have given so much pleasure to some one. Books are always acceptable at hospitals, where they can never get too many or too great a variety.

### Wife of the Chinese Minister.

Madam Wu has sensibly remained faithful to the Oriental dress, and her costumes are the envy of her American sisters. On state occasions she wears a brilliant petticoat of red or blue, heavily embroidered with gold, just long enough to show her little feet. Over this is worn a tunic of black and purple, also richly wrought with bullion, says a writer in Leslie's Weekly. On her breast is a large gold eagle, which signifies that her rank is equal to that of her husband, and she may at all functions enter and leave the room at his side instead of behind him, as would be required if she were of lesser rank. Her head dress is a narrow band of black satin, ornamented with a handsome jewel—usually a large pearl—worth quite a king's ransom, worn directly in front. This band is decorated with flowers, which fall just behind the ears and add much to its picturesque quality. Her jewels are extremely beautiful. The stones are large, of fine luster, exquisitely cut and set in the quaint manner of which Oriental goldsmiths seem to hold the secret, as these settings are rarely seen in this part of the world. Mr. Wu's opinion regarding some of the American customs are well known, and his strictures on the habit of binding the waist instead of the feet have been given wide publicity. Madam Wu shares her husband's views regarding what they look upon as an instrument of torture, the modern corset, and when asked not long ago what she thought most strange upon her arrival in this country said, a pained expression coming over her face, "The small waists. How can they stand it? How can they breathe?"

THE best protection against the sun—to be worn by a person whose skin is particularly tender and susceptible of sunburn—is a veil of yellowish-brown gauze. Photographers know that the actinic rays of the sun do not pass through yellow glass, and the same principle makes the yellowish gauze a better protection for the face than other colors.

### The Japs Laughed Last.

The presence of the Japanese crown prince in Paris has reminded someone of a good story.

It was at the time of the exhibition in 1867. A Japanese embassy went to Paris to treat for three free ports in France, in return for which France was to have three in Japan. The negotiations proved short and amiable.

"Make your choice," said Japan, "we will choose afterward."

The minister of foreign affairs selected Yokohama, Yeddo and Han-Yang.

The embassy made no objection; they simply smiled and went on their way.

Some time afterwards Japan sent word that the three ports mentioned were agreed to, and in return Japan desired Havre, Marseilles and Southampton.

This last last named gave the French officials fits. They never laughed so much before, and certainly never since. Southampton a French port! No, it was too good. Gently, but unmistakably, they explained the situation.

"Why, Southampton is in England," they replied.

"We know that," came the cool response; "but then Han-Yang is in Corea."

Whereupon the French officials collapsed.

### Good Effects of Singing.

From a medical standpoint singing is a most important exercise both by virtue of its influence on the emotions on the respiratory movements, and on the development of the lungs. Nothing better shows the beneficial effect of singing in developing the chest and warding off lung diseases than the great pulmonary development and freedom from pulmonary disease among professional singers. Their general health, moreover, is exceptionally good, and this is probably in a large measure attributable to the mere exercise of their calling, writes Dr. Harry Campbell. Such therapeutic importance do I attach to singing that I recommend it whenever opportunity affords. It is especially useful in defective chest development and in chronic heart disease. Provided the patient can sing with comfort I know of no condition in which singing is contraindicated, unless it be a tendency to tuberculous or aneurismal hæmoptysis. It is scarcely necessary to say that the singer should be so clad as to allow absolute freedom of the chest movements, there should be no constriction of the neck or waist, the collar should be low and ample, and the stays, if worn, ample and loose.

"There is a moral of all human tales,  
'Tis but the same rehearsal of the past,  
First freedom, and then glory—when that fails,

Wealth, vice, corruption—barbarism at last.

And history, with all her volumes vast,  
hath but one page."

## DOMESTIC ECONOMY.

### Making Jelly.

To make jelly requires more skill than making preserves or jams, but if certain rules are observed and the fruit is just right success is usually attained. Currant jelly will probably always remain the favorite variety and in selecting fruit care should be taken to see that it is neither under-ripe nor over-ripe, as in the former case it will be tasteless, and in the latter mushy. Where the housewife has her own garden she is careful to gather the currants on a dry day, because the moisture in the atmosphere is thought to effect the jelly, states a housewife in the Oregonian. To make currant jelly pick the fruit carefully, rejecting any that seem poor; if gritty wash thoroughly, drain in a colander and put in a large porcelain lined preserving kettle or a stone jar. Set the receptacle in a large pan two-thirds full of tepid water and heat slowly, mashing the fruit with a wooden pestle. As

soon as pulpy, pour into a flannel jelly bag and hang over an earthenware bowl or jar to drip all night. Do not squeeze the bag if you wish the juice to remain clear. Next morning measure the juice and for every pint allow a pound of granulated sugar. Heat the sugar in the oven, stirring frequently to prevent burning, and when the juice has boiled twenty minutes and been well skimmed, pour in the hot sugar and stir until it is all dissolved, but not a moment longer. Boil for two to three minutes, test by pouring a few drops in a cup and exposing to the air to see if it begins to thicken. If so, pour at once into glasses which have been taken from hot water and fill to the brim. If the glasses are placed upon a hot, damp cloth while being filled, there is no danger of their cracking. The latest and most approved method of sealing jelly or preserve glasses is to put on a thin coating of paraffine. This is an economical method also, as the paraffine tops may be put aside when the jelly glass is opened and melted over again for future use. Shave half a pound of paraffine in a pitcher or pint cup and melt by setting into a vessel of hot water. The paraffine top should have an extra covering of tin or a layer of cotton batting. Raspberries and currants combined make an excellent jelly as they do jam, and the tooth-someness of this jam is well known. The process of jelly making or preserving fruit in any form is made much easier if the housewife takes the precaution to have all the materials and utensils ready at hand before she begins to work.

### Suggestions in Metal Cleaning.

If your silver spoons have become stained by medicine, you will need sulphuric acid to remove the stains, says the New York Sun. Pour a little of the much-diluted sulphuric acid into a cup and place the spoon in it, letting it remain for a very short time. Then, the stain having disappeared, wash the silver in hot water.

After rinsing in water, silver articles as well as all gold and silver ornaments are best dried in warm boxwood dust kept in a drawer or box with a tightly-fitting lid. All superfluous water may first be removed by swinging the object briskly through the air. This boxwood dust is what jewelers use to dry ornaments that have been washed in either water or benzine. After cleaning your jewelry, put it in the boxwood dust and shake the box containing it until no particles adhere to gold or silver article.

For silver lace powdered magnesia is the best cleanser. Where the lace is much tarnished, the magnesia may be put on in the form of a paste and brushed off when quite dry; in the ordinary way the dry magnesia may be used. The use of cyanide of potassium should be forbidden entirely. It is a most efficient cleansing agent certainly, but it is also a most deadly poison, and should not be handled except by experts in its use.

Sweet oil applied with a flannel cloth is the very best thing known for cleaning articles of bronze. Rub the bronze with the oil until the dust and dirt are removed, then polish it with a piece of chamois skin.

A marble mantel, table or bureau top is the most convenient place in the world for drying ribbons, laces and gauzy handkerchiefs. After washing them thoroughly in a suds of any fine soap and soft water rinse thoroughly, and, without wringing them, lay them on the marble. Stretch the lace and linen with the fingers until all wrinkles disappear, and leave them until they are thoroughly dry. Stretch the ribbons straight, and then with a nail brush brush the width way of the ribbon until creases and marks have gone. Then leave to dry. Hot water should not be used for ribbons or laces.

To REMOVE fruit stains from enamel saucepans, use chloride of lime. Fill the saucepan with cold water, add one teaspoonful of chloride of lime to each half gallon, and boil until the stain is removed.



## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Aug. 1, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Aug.	Sept.
Wednesday.....	73½@74½	74½@75½
Thursday.....	73½@75	74½@76
Friday.....	74½@75½	75½@76½
Saturday.....	75½@74½	76½@75
Monday.....	73½@74½	74½@75½
Tuesday.....	73½@74	74½@75½

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	Sept.	Dec.
Wednesday.....	6s 0 d	6s 1 d
Thursday.....	6s 0½d	6s 1½d
Friday.....	6s 1½d	6s 2½d
Saturday.....	6s 1½d	6s 2½d
Monday.....	6s 0½d	6s 1½d
Tuesday.....	6s 0½d	6s 1½d

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec. 1900.	May, 1901.
Thursday.....	1 13 @ 1 13½	— @ —
Friday.....	1 13½ @ 1 13½	— @ —
Saturday.....	1 12½ @ 1 13	— @ —
Monday.....	1 12½ @ 1 12½	— @ —
Tuesday.....	1 12 @ 1 11½	— @ —
Wednesday.....	1 11½ @ 1 12½	— @ —

## WHEAT.

No pronounced changes have been established in quotable values for spot wheat during the week under review, but the general tendency was to an easier feeling or less favorable condition for sellers than was current during greater part of previous week. The tendency against sellers was more attributable to continued light supply of ocean tonnage and comparatively stiff freight rates, as also to slow demand from importing countries at the stiffer figures recently demanded for wheat, than to any material improvement in crop conditions or returns either in this country or Europe. The vast majority of growers, both here and abroad, refuse to let go at prevailing rates, and it would seem from surface indications that the course was warranted, although there is nothing more uncertain than the future of a cereal market, and no more thankless job than attempting to prognosticate. The outward movement of wheat from this port in July was larger than for corresponding month last year, aggregating 587,910 centals, valued at \$630,254, as against 323,658 centals, valued at \$356,517, for July, 1899. The world's shipments of wheat for the week are reported at 5,995,000 bushels, being 1,610,000 bushels less than for preceding week.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, \$1.11½@1.13½.	
May, 1901, delivery, \$—@—c.	
Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at \$1.11½@1.12½; May, 1901, —@—.	
California Milling.....	\$1 10 @ 1 15
Cal. No. 1 shipping, alongside.....	1 05 @ 1 07½
Oregon Valley.....	1 05 @ 1 07½
Washington Blue Stem.....	1 07½ @ 1 12½
Washington Club.....	1 02½ @ 1 07½
Off qualities wheat.....	1 00 @ 1 02½

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-1900.	1900-01.
Liv. quotations.....	6s0d@6s0½d	6s2d@6s2½d
Freight rates.....	32¢—s	37½¢@40s
Local market.....	\$1 05@1 07½	\$1 05@1 07½

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

The demand is not brisk nor is the market noteworthy for firmness. There is a moderate export movement, mostly of flour engaged ahead or going forward on contract. Business on local account is of light volume. Spot supplies are more than ample for current needs. Sales at extreme figures are confined mostly to small transfers, mainly of favorite marks insisted on by special custom.

Superfine, lower grades.....	\$2 25@2 50
Superfine, good to choice.....	2 60@2 80
Country grades, extras.....	3 15@3 40
Choice and extra choice.....	3 40@3 65
Fancy brands, jobbing.....	3 60@3 75
Oregon, Bakers' extra.....	2 90@3 25
Washington, Bakers' extra.....	2 90@3 40

## BARLEY.

Quotable values continued close to figures of previous week, but the market could not be said to incline in favor of buyers, especially for choice to select qualities of either Brewing or Feed de-

scriptions. As would naturally be expected, firmness was most pronounced on desirable Brewing or Shipping grades. There was a good shipping demand for bright, clean and heavy barley, with some transfers of exceptionally fine lots at an advance on quotations. Values for best Feed qualities were tolerably well sustained at the rates quoted.

Feed, No. 1 to choice.....	75 @ 77½
Feed, fair to good.....	70 @ 72½
Brewing, No. 1 to choice.....	80 @ 87½
Chevalier, No. 1 to choice.....	92½ @ 95
Chevalier, No. 2.....	80 @ 85
Chevalier, poor.....	75 @ 80

## OATS.

Market is decidedly firm at the ruling figures, especially for choice to select qualities, both milling and feed descriptions, and gives promise of so remaining for at least some weeks to come. The China steamer sailing immediately after date of last report carried 525 tons for Japan, being by far the heaviest shipment of oats ever made from this port.

White Oats, fancy feed.....	1 25 @ 1 30
White, good to choice.....	1 17½ @ 1 25
White, poor to fair.....	1 10 @ 1 15
Gray, common to choice.....	1 12½ @ 1 17½
Milling.....	1 20 @ 1 30
Surprise, good to choice.....	1 25 @ 1 35
Black Russian.....	1 02½ @ 1 12½
Red.....	1 05 @ 1 22½

## CORN.

There are fair supplies of domestic Large Yellow and White, but not much Eastern corn of any sort and very little Small Yellow, with latter concentrated in few hands. The market inclines against buyers, although in the matter of quotable rates there are no radical changes to record.

Large White, good to choice.....	1 22½ @ 1 25
Large Yellow.....	1 17½ @ 1 20
Small Yellow.....	1 40 @ 1 50
Eastern, in bulk (carload lots).....	1 16 @ 1 18

## RYE.

Not very much offering, but enough for immediate requirements, demand being light.

Good to choice, new.....	92½ @ 97½
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## BUCKWHEAT.

Some inquiry for seed, but aside from this there is very little now wanted. Spot stocks are decidedly small.

Good to choice.....	2 00 @ 2 10
Silverskin.....	— @ —

## BEANS.

Recent purchasing on Government account has caused a tolerably stiff market for Small Whites. For Lady Washingtons, Bayos, Pinks and Limas, the market is rather easy at the quotations, but there are no particularly heavy offerings of either sort, and no undue selling pressure. Stocks of Pea beans and Reds are too light to admit of the filling of other than very small orders.

Pea, fair to good, 100 lbs.....	3 40 @ 3 60
Small White, good to choice.....	3 40 @ 3 60
Lady Washington.....	2 75 @ 2 90
Butter, small.....	— @ —
Butter, large.....	— @ —
Pinks.....	2 75 @ 2 90
Bayos, good to choice.....	2 65 @ 2 75
Reds.....	3 25 @ 3 75
Red Kidneys.....	— @ —
Limas, good to choice.....	5 25 @ 5 35
Black-eye Beans.....	3 25 @ 3 75
Horse Beans.....	2 25 @ 2 50
Garbanzos, large.....	2 50 @ 2 75
Garbanzos, small.....	2 00 @ 2 25

Recent advices by mail from New York give the following review of the bean market, prices quoted being per 60-lb. bushel:

Another week has been added to the long period of dull trading, and the market has continued to decline under some pressure to sell. The conditions are not unusual, however; jobbing trade is always light at this season of year, and it is not often that exporters show much interest. Crop prospects have improved somewhat, both in this State and Michigan, and this has tended to make an easier feeling among all classes of operators. Marrow have declined gradually, and at the close sales above \$2.10 for strictly choice quality are quiet rare. Medium are 2½@5c lower, best marks being much easier bought than sold at \$2.00; some pretty good bag stock is offering at \$1.95. Pea are not plenty, but have shared in the decline because of the absence of demand; the choicest lots are new offering at \$2.20 in barrels and \$2.15 for bags. Red Kidney opened at \$2.10 but that price could not be held, and by Tuesday there were free offers to sell at \$2.07½; since then the price has fallen to \$2.05, and only a little stock is wanted at that. White Kidney are well sustained because the very limited supply. Yellow Eye slow and not materially changed. Turtle Soup are not moving at all; holders ask \$1.45@1.50, but there is no demand and under any pressure to move good sized lots the price would have to be cut materially. California Lima not plenty, well controlled and fairly steady at \$3.52½@3.55. Imported Pea are selling slowly

in range of \$1.80@1.95, very few good enough to bring the outside figure. Foreign Medium have shared in the general weakness and at the close \$1.75@1.80 is obtained only for a few fancy Leghorn; the average prime grades are offering at \$1.65@1.70, and there is a good deal of inferior stock which can be bought from \$1.50 downward. The supply of green and Scotch peas is very moderate, but a few wanted.

## DRIED PEAS.

No stocks of consequence and necessarily a dull market. It will be several months before new crop will begin to arrive.

Green Peas, California.....	2 40 @ 2 50
Niles Peas.....	2 15 @ 2 25

## WOOL.

While there is no great amount of business to report, manufacturers through their brokers and agents have been feeling their way to see at what figures they could operate. They were especially desirous of securing terms on desirable lines. Holders show no disposition to crowd offerings. Former quotations are continued. It looks as though there would be more activity soon.

## SPRING.

Humboldt and Mendocino.....	16 @ 18
Northern, free.....	14 @ 16
Northern, defective.....	11 @ 13
Middle Counties, free.....	14 @ 16
Middle Counties, defective.....	11 @ 13
Southern Mountain, 12 mos.....	8 @ 10
Southern Mountain, free, 7 mos.....	9 @ 11
Southern Mountain, defective, 7 mos.....	8 @ 10
Oregon Valley, fine.....	17 @ 19
Oregon Valley, coarse to medium.....	16 @ 17
Eastern Oregon, choice.....	15 @ 16
Eastern Oregon, fair to good.....	11 @ 14
Nevada, as to condition.....	14 @ 16
San Joaquin Fall Lambs.....	8 @ 9

## HOPS.

Market is exceedingly quiet and is likely to remain so for the next three or four weeks, or until new Hops begin to come forward. Choice new to arrive are quoted at 10c., with few growers who have Hops of the desired standard caring to contract at the figure named. The yield on this coast will be considerably lighter than last season, but the shortage will be principally in this State.

Good to choice, 1899 crop.....	7 @ 10
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The following report of the hop market is from a New York authority, furnished by mail of late date:

The movement of stock out of first hands has not shown much larger business than last week, but the reports from the breweries have indicated a very liberal consumption of malt liquors owing to the excessively hot weather, and brewers must have cut down their supply of hops considerably. It is very evident that fresh purchases must be made before the new crop is harvested, and realizing the light stocks that are left to draw on holders take quite a hopeful view of the situation. The range of values has not changed sufficiently to warrant making any alterations in our quotations, but there is a firm tone on all grades, even the poor Oregon hops having some call. Yearlings are practically gone. Quite a number of old olds are still in dealers' and speculators' hands, and they have not yet commenced to move. Crop prospects throughout this country have not changed materially. Warmer weather in England has been favorable to the growth of vine, but constant washing is found necessary to prevent the spread of vermin.

## HAY AND STRAW.

Arrivals of Hay have continued heavy and far above the average, causing the market to rule weak at the recently established advance, especially for other than most select qualities of Wheat and Tamo Oat. A considerable portion of recent receipts had been previously arranged for, otherwise values would certainly have receded. As it was, extreme quotations were not obtainable from the most desirable or largest buyers.

Wheat.....	8 00@12 00
Wheat and Oat.....	8 30@11 00
Oat.....	7 00@10 00
Barley.....	5 50@8 50
Volunteer.....	4 50@6 50
Alfalfa.....	6 00@7 50
Stock.....	5 00@6 50
Compressed.....	8 00@12 00
Straw, ½ bale.....	25 @ 37½

## MILLSTUFFS.

Bran market continued easy, with offerings tolerably heavy. Middlings and Shorts were held at generally unchanged rates. Market for Rolled Barley was moderately firm. Milled Corn was held fully up to the figures of preceding week.

Bran, ½ ton.....	12 00@13 00
Middlings.....	15 00@18 00
Shorts.....	13 00@15 00
Barley, Rolled.....	16 00@16 50
Cornmeal.....	25 00@25 50
Cracked Corn.....	26 50@27 00

## SEEDS.

Market shows the same inactivity as

previously noted. Beyond a light jobbing trade in bird seed, there is no evidence of anything doing. There are no large spot stocks of any kind. New crop Mustard is expected soon to appear on market.

Mustard, Trieste.....	Per ctt.
Mustard, Yellow.....	— @ —
Flax.....	— @ —
Canary.....	Per lb.
Rape.....	3¼ @ 4
Hemp.....	2 @ 3
Timothy.....	3¼ @ 4
Alfalfa, Utah.....	— @ —

## BAGS AND BAGGING.

The Grain Bag market is slow and lacking in firmness. The demand in this State is practically ended for the season. Oregon and Washington will be drawing moderate quantities for several months yet. Fruit Sacks are in fair request at unchanged values.

Calcutta Grain Bags, huyer June-July.....	— @ —
Calcutta Grain Bags, spot.....	6 @ 6½
San Francisco Grain Bags, 22x36, spot.....	6 @ 6½
State Prison Bags in lots of 2000, ½ 100.....	5 65 @ —
Wool Sacks, 4 lbs.....	— @ 32½
Wool Sacks, 3½ lbs.....	— @ 28½
Fleece Twine.....	7½ @ —
Gunnies.....	— @ 12½
Bean Bags.....	4½ @ 5½
Fruit Sacks, cotton.....	6½ @ 7½

## HIDES, PELTS AND TALLOW.

Dullness and absence of strength remain leading features of the Hide and Pelt market, with prospects poor for any material improvement being soon experienced. Tallow is fairly steady at rates quoted.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	9½	8½
Medium Steers, 48 to 56 lbs.....	8½	7½
Light Steers, under 48 lbs.....	8½	7½
Heavy Cow Hides, over 60 lbs.....	8½	7½
Light Cow Hides, under 60 lbs.....	8½	7½
Wet Salted Klp.....	8½	7½
Wet Salted Veal.....	8½	7½
Wet Salted Calf.....	9	8
Dry Hides.....	15	12
Dry Klp and Veal, 11 to 16 lbs.....	15	12
Dry Calf, under 4 lbs.....	15	12
Salted Horse Hides, large.....	2 00	@ —
Salted Horse Hides, medium.....	1 50	@ —
Salted Horse Hides, small.....	1 00	@ —
Dry Horse Hides, large.....	1 50	@ —
Dry Horse Hides, small.....	75	@ 1 00
Dry Colts' Hides.....	50	@ —
Pelts, long wool, ¾ skin.....	1 00	@ 1 25
Pelts, medium, ¾ skin.....	70	@ 90
Pelts, short wool, ¾ skin.....	35	@ 60
Pelts, shearing, ¾ skin.....	30	@ 35
Deer Skins, best summer.....	27½	@ 30
Deer Skins, good medium.....	20	@ 22½
Deer Skins, thin winter.....	—	@ 10
Elk Hides.....	10	@ 12
Tallow, good quality.....	4	@ —
Tallow, No. 2.....	3	@ 3½
Goat Skins, perfect.....	30	@ 37½
Goat Skins, damaged.....	10	@ 20
Kid Skins.....	5	@ 10

## HONEY.

Conditions remain much the same as noted in preceding review. While values are being in the main well sustained, no large quantities could be placed at full current rates. Trade is mostly of a light jobbing character. Stocks of amber grades are of fair volume. Water White honey of desirable flavor continues scarce.

Extracted, White Liquid.....	7¼ @ 7½
Extracted, Light Amber.....	6¼ @ 7¼
Extracted, Amber.....	5¼ @ 6
White Comb, 1 lb frames.....	12 @ 12½
Amber Comb.....	9 @ 11
Dark Comb.....	6½ @ 7½

## BEESWAX.

Market is firm at the quotations, and is likely to so continue, stocks and offerings being light.

Good to choice, light, ½ lb.....	26 @ 27
Dark.....	24 @ 25

## LIVE STOCK AND MEATS.

Beef is in fair demand and current quotations are being well maintained. Large Veal is in ample supply for the demand at current rates, but Small Veal is in light stock, and there will be no noteworthy arrivals of the latter for several months to come. Mutton and Lamb sold to about as good advantage as preceding week, with tendency to improved inquiry. Hogs arriving were mostly local product, with offerings not more than sufficient for immediate home needs.

Beef, first quality, dressed, net ½ lb.....	6 @ —
Beef, second quality.....	5½ @ —
Beef, third quality.....	5 @ —
Mutton—ewes, 7@7½c; wethers.....	7½ @ 8
Hogs, hard grain fed, medium.....	5½ @ 6
Hogs, small, fat.....	5½ @ 6
Hogs, large, hard.....	5½ @ 6
Hogs, acorn-fed.....	— @ —
Hogs, feeders.....	5¼ @ 5½
Hogs, country dressed.....	6 @ 6½
Veal, small, ½ lb.....	8 @ 10
Veal, large, ½ lb.....	8 @ —
Lamb, spring, ½ lb.....	8 @ 9

## POULTRY.

There was a superabundance of ordinary young and common old fowls, mostly



chickens, with market for same weak. Poultry in fine flesh was not plentiful, and where such was of desirable size, higher rates than were warranted as quotations were realized.

Turkeys, dressed, $\frac{1}{2}$ lb.	—	@	—
Turkeys, live hens, $\frac{1}{2}$ lb.	10	@	11
Turkeys, live gobblers, $\frac{1}{2}$ lb.	9	@	10
Hens, California, $\frac{1}{2}$ dozen	3 50	@	5 00
Roosters, old, $\frac{1}{2}$ dozen	3 50	@	4 00
Roosters, young (full-grown), $\frac{1}{2}$ dozen	3 50	@	5 00
Fryers, $\frac{1}{2}$ dozen	3 00	@	3 50
Broilers, large, $\frac{1}{2}$ dozen	2 50	@	3 00
Broilers, small, $\frac{1}{2}$ dozen	1 75	@	2 00
Ducks, old, $\frac{1}{2}$ dozen	3 00	@	4 00
Ducks, young, $\frac{1}{2}$ dozen	3 00	@	4 00
Geese, pair	1 12 $\frac{1}{2}$	@	1 25
Goslings, pair	1 37 $\frac{1}{2}$	@	1 50
Pigeons, old, $\frac{1}{2}$ dozen	1 25	@	1 50
Pigeons, young, $\frac{1}{2}$ dozen	1 25	@	1 50

BUTTER.

There was a further advance in prices for most select qualities of fresh Butter, demand showing improvement and the production decreasing. Defective qualities of fresh, however, were not salable to advantage, cold storage or packed butter being taken in preference, the latter being in good supply.

Creamery, extras, $\frac{1}{2}$ lb.	23	@	—
Creamery, firsts, $\frac{1}{2}$ lb.	21	@	22
Creamery, seconds, $\frac{1}{2}$ lb.	20	@	21
Dairy, select, $\frac{1}{2}$ lb.	21	@	22
Dairy, seconds, $\frac{1}{2}$ lb.	19	@	20
Dairy, soft and weedy, $\frac{1}{2}$ lb.	—	@	—
Mixed store, $\frac{1}{2}$ lb.	15	@	16
Creamery in tubs, $\frac{1}{2}$ lb.	19	@	21
Pickled Roll, $\frac{1}{2}$ lb.	18	@	20
Parkin, California, choice to select, $\frac{1}{2}$ lb.	19	@	21
Parkin, common to fair, $\frac{1}{2}$ lb.	17	@	18

CHEESE.

The market for domestic Cheese continues quiet, with little wholesale demand, most of the large dealers having all they can conveniently handle for the time being. To effect large sales, lower figures than lately current or than holders generally are willing to take, would have to be accepted.

California, fancy flat, new	9 $\frac{1}{2}$	@	—
California, good to choice	8 $\frac{1}{2}$	@	9
California, fair to good	8	@	8 $\frac{1}{2}$
California Cheddar	—	@	—
California, "Young Americas"	9 $\frac{1}{2}$	@	10 $\frac{1}{2}$

EGGS.

Strictly select fresh, especially uniformly large and white Eggs, are in light receipt, with market firm and quotably higher than last noted. Arrivals of this description will continue on the decrease for some time to come and values will steadily harden, until nearly the entire trade will be compelled in the late fall and early winter to resort temporarily to cold storage stock.

California, select, large, white and fresh	23	@	—
California, select, irregular color & size	21	@	22
California, good to choice store	16	@	19
Eastern, as to section and grading	15 $\frac{1}{2}$	@	19
Eastern, cold storage	—	@	—

VEGETABLES.

Changes in quotable values for Vegetables now in season were not numerous or marked during the week under review. Onion market showed a little better tone for Yellow, owing to slightly increased demand, but was not appreciably higher. Red Onions have had their run for the season. Corn, Squash, Tomatoes and Cucumbers were all plentiful and cheap. Peas and String Beans of choice quality were in rather light receipt. Sweet Potatoes put in an appearance, but were mostly too small to be much sought after.

Beans, String, $\frac{1}{2}$ lb.	2	@	3 $\frac{1}{2}$
Beans, Wax, $\frac{1}{2}$ lb.	3	@	5
Beans, Lima, $\frac{1}{2}$ lb.	3	@	4
Cabbage, choice garden, $\frac{1}{2}$ 100	50	@	—
Cauliflower, $\frac{1}{2}$ dozen	50	@	—
Cucumbers, Bay, $\frac{1}{2}$ box	25	@	40
Egg Plant, $\frac{1}{2}$ box	60	@	75
Garlic, $\frac{1}{2}$ lb.	2 $\frac{1}{2}$	@	3
Green Corn, $\frac{1}{2}$ sack	75	@	25
Green Corn, Alameda, $\frac{1}{2}$ crate	1 25	@	1 50
Onions, Yellow Danver, $\frac{1}{2}$ cental	85	@	1 00
Okra, Green, $\frac{1}{2}$ box	75	@	1 00
Peas, Sweet, garden, $\frac{1}{2}$ lb.	4	@	5
Peppers, Green Chile, $\frac{1}{2}$ box	30	@	65
Peppers, Bell, $\frac{1}{2}$ lb.	30	@	65
Pickle Cucumbers, No. 1, $\frac{1}{2}$ box	40	@	60
Pickle Cucumbers, No. 2, $\frac{1}{2}$ box	35	@	50
Squash, Summer, $\frac{1}{2}$ large box	40	@	50
Tomatoes, River, $\frac{1}{2}$ large box	25	@	75

POTATOES.

There has been a slightly better tone to the market owing to a moderate increase in the shipping demand. In the quotable range of values there were no noteworthy changes, but prices averaged better than for some weeks preceding. Any changes in the near future are more apt to be higher than to easier rates.

Burbanks, River, $\frac{1}{2}$ cental	30	@	70
New Potatoes, $\frac{1}{2}$ cental	30	@	70
Sweet Potatoes, Yellow, $\frac{1}{2}$ cental	2 00	@	3 00

The Fruit Market.

FRESH FRUITS.

Most of the seasonable fresh fruits were in liberal receipt, offerings including much choice to select stock, but there was still considerable of inferior quality which had

better never been forwarded to market, as latter brings little or nothing and tends to bring down the price of good fruit. Apricots are practically out for the season and are now hardly quotable in a regular way; good to choice brought this week \$15@25 per ton. Peaches were in moderate receipt, mostly Freestones; prices were quite well sustained at about same quotable range as previous week. Crawford's in bulk were quotable at \$12.50@20 per ton. Choice Clings are expected to bring about \$25 per ton, and select may rule a little higher. Plums and Prunes were offered freely at generally unchanged figures, although the glut of Plums was not so heavy as for a week or two previous. Apples were only in moderate stock, but of other than choice to select there was more than enough for the demand. Grapes were in fair receipt, but the quality in the main was not desirable and they moved slowly. Melons of the various descriptions in season did not sell to quite as good advantage as preceding week, the weather part of the time being less favorable. There were no excessive receipts of Berries of any variety and prices for most kinds showed quotable improvement.

Apples, fancy, 4-tier box	1 00	@	1 25
Apples, good to choice, $\frac{1}{2}$ 50-lb box	65	@	1 00
Apples, common to fair, $\frac{1}{2}$ 50-lb box	30	@	50
Apples, Crab, $\frac{1}{2}$ box	25	@	50
Apricots, Royal, $\frac{1}{2}$ ton	15 00	@	25 00
Blackberries, $\frac{1}{2}$ chest	2 00	@	3 50
Cantaloupes, $\frac{1}{2}$ crate	1 50	@	3 00
Grapes, Seedless Sultan, $\frac{1}{2}$ crate	75	@	1 00
Grapes, Fontainebleau, $\frac{1}{2}$ crate	40	@	60
Grapes, Rose of Peru, $\frac{1}{2}$ box	50	@	75
Grapes, Black Hamburg, $\frac{1}{2}$ box	50	@	75
Grapes, Muscat, $\frac{1}{2}$ box	50	@	75
Raspberries, $\frac{1}{2}$ chest	4 00	@	7 00
Logan Berries, $\frac{1}{2}$ chest	6 00	@	7 50
Nectarines, Red, $\frac{1}{2}$ box	50	@	75
Nectarines, White, $\frac{1}{2}$ box	40	@	65
Nutmeg Melons, $\frac{1}{2}$ crate	75	@	1 50
Plums, ordinary varieties, $\frac{1}{2}$ box	25	@	40
Plums, fancy, $\frac{1}{2}$ box	50	@	65
Prunes, $\frac{1}{2}$ crate	25	@	50
Peaches, $\frac{1}{2}$ box	25	@	50
Peaches, wrapped, $\frac{1}{2}$ box	60	@	75
Pears, Bartlett, $\frac{1}{2}$ box	40	@	1 00
Pears, common kinds, $\frac{1}{2}$ box	25	@	65
Strawberries, Longworth, $\frac{1}{2}$ chest	4 00	@	7 00
Strawberries, Large, $\frac{1}{2}$ chest	2 50	@	4 00
Whortleberries, $\frac{1}{2}$ lb.	5	@	7
Watermelons, $\frac{1}{2}$ 100	8 00	@	18 00

DRIED FRUIT.

The bulk of the business in cured and evaporated fruits, as for some weeks past, is still confined to Apricots, values for which are showing a wider range, as previously predicted in these columns would likely be the case. The market is fairly steady for common qualities of Royals, or the cheaper grades, with no noteworthy competition among buyers to secure the latter sort, but for choice to fancy there is eager demand at advanced figures, and anything like wholesale quantities of this description difficult to obtain. Strictly fancy Apricots could be more readily placed at 8 $\frac{1}{2}$ c. than some of the most ordinary at 5 $\frac{1}{2}$ c. High grade Moorpark are not offering at 8 $\frac{1}{2}$ c., in fact are so scarce as not to be quotable in the regular list. A few Evaporated Apples of new crop have arrived, and are finding custom in a moderate way on local account and for the Government at 5 $\frac{1}{2}$ c., the quality being fairly choice, but values for new are not well defined; quotations below are for old stock, which remains in fair supply. Peaches of new crop are still in very light receipt in this center, but carloads are being made up at interior points for the East. The quotable range on unpeeled Peaches in sacks is 5@7 $\frac{1}{2}$ c. Eastern buyers name 5c. for fairly good in carload lots, but there is no evidence of dealers getting the quality desired at the figures named, while strictly fancy are not to be had under the outside price above noted. Pitted Plums remain quotably as last stated, but very few have come forward up to date. New Pears have not yet arrived and are not yet quotable; some very low figures have been named in the interest of buyers, probably for the purpose of making the producer think he is getting a good price when he is offered a little higher figure. Prunes of 1899 crop are in rather light stock and are being rather firmly held, although not quotably higher. Prices for this year's Prunes still remain undetermined.

EVAPORATED OR BLEACHED.

Apricots, Royal, prime	5 $\frac{1}{2}$	@	—
Apricots, Royal, choice, in sacks, $\frac{1}{2}$ lb.	6 $\frac{1}{2}$	@	7
Apricots, Royal, fancy	8	@	8 $\frac{1}{2}$
Apricots, Moorpark	—	@	—
Apples, in 50-lb boxes, rings, pressed, fancy	5 $\frac{1}{2}$	@	5 $\frac{1}{2}$
Apples, 50-lb boxes, rings, pressed, good to choice	4	@	4 $\frac{1}{2}$
Figs, White, fancy pressed	5 $\frac{1}{2}$	@	5 $\frac{1}{2}$
Nectarines, $\frac{1}{2}$ lb.	5	@	5 $\frac{1}{2}$
Peaches, unpeeled, fancy	6 $\frac{1}{2}$	@	7 $\frac{1}{2}$
Peaches, unpeeled, choice	5	@	5 $\frac{1}{2}$
Peaches, peeled, in boxes	12	@	15
Pears, unpeeled Bartletts, halved, fancy	—	@	—
Pears, halved, unpeeled Bartletts	—	@	—
Pears, quartered, unpeeled Bartletts	—	@	—
Plums, Black, pitted	5 $\frac{1}{2}$	@	6
Plums, White and Red	6 $\frac{1}{2}$	@	—
Prunes, in sacks, 40—50s.	4 $\frac{1}{2}$	@	4 $\frac{1}{2}$
50—60s.	—	@	—
60—70s.	—	@	—
70—80s.	—	@	—

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Prunes in boxes, $\frac{1}{2}$ c higher for 25-lb boxes, $\frac{1}{2}$ c higher for 50-lb boxes.	
Prunes, Silver	4 $\frac{1}{2}$ @ 6
COMMON SUN-DRIED.	
Apples, sliced	3 @ 3 $\frac{1}{2}$
Apples, quartered	3 $\frac{1}{2}$ @ 4 $\frac{1}{2}$
Figs, Black	2 @ 3
Figs, White	3 @ 3 $\frac{1}{2}$
Peaches, unpeeled	4 @ 4 $\frac{1}{2}$

Advices by mail of recent date from New York City furnish the following review of the dried fruit market.

There is rarely more than a light jobbing trade in evaporated apples at this season of year, the markets being well supplied with green fruits of various kinds; such sales as are making are generally in range of our quotations but if there was effort to realize on good size lots less money would have to be accepted. Some trading has been done in futures, chiefly in prime fruit, October and November delivery; one or two sales made early in the week at 4 $\frac{1}{2}$ @5c, but later 4 $\frac{1}{2}$ @4 $\frac{1}{2}$ c was accepted, and we are advised that one transaction was consummated at a still lower figure. From almost every section of the world where apples are grown there are unusually favorable crop reports. Only a few sun-dried apples left in first hands and the inquiry corresponds with the supply. Chops very dull; we have reports of prime lots selling for delivery October to February at 1 $\frac{1}{2}$ c. Cores and skins have had some demand, several hundred barrels of prime sound stock selling at 75c per 100 pounds f. o. b.; most of the remaining lots are more or less fermented and sales range down to 25@37 $\frac{1}{2}$ c. Shippers are inquiring about the probable opening price of Georgia peaches; it is too early to determine this, but there is likely to be a demand for them and receivers are talking 8c for fine stock. Small jobbing sales of raspberries at 14@15c. A few barrels new southern cherries are here and 10c is asked for prime Virginia. Some sales of California new Royal apricots at 8 $\frac{1}{2}$ c; the crop is fairly large. New peaches are offering from the coast but no prices established as yet. The stock of small and medium size prunes is about exhausted, and there are not many 50s here; good demand is noted for 40s at about 5 $\frac{1}{2}$ @6c with choice in 25-pound boxes occasionally selling at 6 $\frac{1}{2}$ c.

Apricots, Cal., new, $\frac{1}{2}$ lb.	8 $\frac{1}{2}$ @ 8 $\frac{1}{2}$
Peaches, Cal., unpeeled, in bxs, $\frac{1}{2}$ lb.	7 @ 8
Peaches, Cal., unpeeled, in bags, $\frac{1}{2}$ lb.	6 @ 7 $\frac{1}{2}$
Prunes, Cal., $\frac{1}{2}$ lb.	4 $\frac{1}{2}$ @ 6 $\frac{1}{2}$

RAISINS.

Only a light jobbing trade in last year's raisins at irregular prices. Figures for new pack are expected to be fixed about the middle of September. That the pack this year will prove excessive does not now appear likely.

CITRUS FRUITS.

Oranges are in too light stock and too slim demand to warrant quoting. Lemons have been further advanced, owing to continued good demand, and only moderate stocks, especially of desirable qualities. The market for Limes is firm, and is not likely to incline in buyers' favor in the near future.

Oranges—Navels, fancy $\frac{1}{2}$ box	—@—
Navels, good to choice	—@—
Navels, common to fair	—@—
Valencias	1 50@3 00
St. Michaels	1 50@2 75
Mediterranean Sweet	1 50@2 50
California Seedlings	—@—
Lemons—California, select, $\frac{1}{2}$ box	4 00@4 50
California, good to choice	3 00@3 50
California, common to fair	1 50@2 50
Limes—Mexican, $\frac{1}{2}$ box	5 50@6 00
California, small box	—@—

NUTS.

The Almond market is strong. Most of this season's California crop has been already bought up and as high as 13c. has been paid for round lots of paper shell. Walnut market is quiet, with no disposition to crowd new to sale at low figures. Poanuts are commanding steady rates.

California Almonds, shelled	16 @22
California Almonds, paper shell, $\frac{1}{2}$ lb.	12 @13
California Almonds, soft shell	10 @11
California Almonds, hard shell	6 @ 7
Walnuts, White, soft shell	9 @11
Walnuts, White, California, standard	7 $\frac{1}{2}$ @ 9
Chestnuts, California Italian	8 @10
Peanuts, California, fair to prime	5 @ 6
Peanuts, Eastern, hand-picked	6 @ 6 $\frac{1}{2}$
Pine Nuts	5 @ 6

WINE.

There are no new developments to record in the wine market. Most growers having disposed of their holdings, there is little opportunity for effecting transfers from first hands. Quotable values continue at last noted range, 14@16c per gallon wholesale for new dry wines, and 17@20c per gallon in a small way for high grade or selected stock. The Panama steamer sailing on the 28th ult. took 126,139 gallons and 32 cases wine, the greater portion, 117,663 gallons, being destined for New York.

California Dried Fruit at New York.

New York, Aug. 1.—Evaporated apples, common, 4 $\frac{1}{2}$ @5c; prime wire tray, 5 $\frac{1}{2}$ @5 $\frac{1}{2}$ c; choice, 5 $\frac{1}{2}$ @6 $\frac{1}{2}$ c; fancy, 7@7 $\frac{1}{2}$ c. California dried fruits.—Stocks light and demand only moderate. Prunes, 3 $\frac{1}{2}$ @7c. Apricots, Royal, 11@14c; Moorpark, 15@17c. Peaches, unpeeled, 6@9c; peeled, 14@18c.

Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, $\frac{1}{4}$ sacks	129,065	500,580
Wheat, centals	168,279	506,539
Barley, centals	48,430	231,776
Oats, centals	16,160	56,538
Corn, centals	1,290	3,442
Rye, centals	450	3,855
Beans, sacks	4,752	10,543
Potatoes, sacks	27,028	93,458
Onions, sacks	3,984	11,639
Hay, tons	6,329	16,917
Wool, hales	484	2,468
Hops, hales	30	31

EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, $\frac{1}{4}$ sacks	60,600	275,764
Wheat, centals	199,904	503,130
Barley, centals	205	2,765
Oats, centals	10,542	10,960
Corn, centals	—	834
Beans, sacks	1,450	2,255
Hay, hales	10	165
Wool, pounds	—	160,090
Hops, pounds	—	6,882
Honey, cases	34	89
Potatoes, packages	—	1,323

THE Fair of Agricultural District No. 40 (Yolo county), to be given at Woodland from Aug. 27th to Sept. 1st, inclusive, will be one of the best given in that county for years. The Directors are making special efforts to induce a fine display of stock and natural products, and it is certain the industrial features will be of great merit. C. R. Hoppin, a well-known agriculturist, is President of the Association, C. F. Thomas of the Bank of Woodland Secretary.

WHEN petroleum is talked of, a "barrel" is understood to mean 42 gallons. A wine barrel contains 31 $\frac{1}{2}$  gallons and is the standard used when capacity of cisterns or tanks is given in barrels. Petroleum will weigh 6 $\frac{1}{2}$  pounds per gallon.

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## CORRESPONDENCE.

### Co-operation.

TO THE EDITOR: The subject of co-operation has again made its appearance in your columns—a subject which each and every one ought to feel an interest in. I agree with A. E. Becker, whose few lines have brought to the front the true way to deal with the trust problem; but, as all industries need protection as well as the farmer, I will modify by saying: "The only way the masses can meet the trusts of to-day is to form a trust," that all are interested in, and, to effectually carry out this, needs the hearty co-operation of every true citizen; first, it is necessary to decide what kind of a trust, and then help support one.

Now, suppose we take the transportation question, that all are interested in, and try to bring to the minds of those interested the need of centralizing our energies on one system, where the most will be benefited, all helping to form a corporation, which will certainly bring a better and more economic way of transporting what we already produce; besides, as the transportation facilities increase, so will the produce. Let us begin by saying that we will all take stock in a transportation line to the amount of what we produce over and above our living; laborers to take stock to the amount of what they earn over and above their living, and to be recompensed with the object that they can accumulate and earn stock in the corporation. Of course, the greater the amount expended for living, the less the stock earned.

Now, to make it more easy for all, let those come in who hold mortgages and take stock to the amount of their indebtedness, giving those who are in debt an opportunity of improving the property and help make a dividend for all.

Lately I have been through part of the adjoining counties and find most of the farming communities in a not very favorable condition for the welfare of our country, and, if we will look into the cause, we will find that the recompense that labor gets is taken entirely away from the farm; besides, the interest or rent that has to be paid to corporations leaves the producer in anything but a prosperous condition; consequently, the necessity of leaving the farm to almost, if not quite, lay idle, to the detriment of the mortgagee and also of our country. The producer is the life and sinew of stability; yet those corporations and their employes live off the fat of the land and in mansions compared with those who feed them. To-day we are helping to feed the different powers that are at war, little thinking of developing and maintaining our own resources at home. Let us turn our attention to those within our borders and make this nation an exemplar for all nations, that we may be that beacon light that will keep us in the future an example for others to follow, and to be this we must look well to all classes for their advancement, which certainly calls for the co-operation and protection of the producers of the wealth of our country—the food supplies for the masses—and the encouragement of such.

SAMUEL M. COPPIN.

Pleasant Grove, July 24.

### Pacific Cat Club Election.

At a recent meeting of the Pacific Cat Club the following officers were elected: President, Mrs. C. E. Martling; vice-president, Mrs. A. H. Hoag; corresponding secretary, Mrs. Alfred D. Robinson; recording secretary, Mrs.

A. H. Brod; treasurer, Mrs. C. E. Hilderbrand; committee on finance, Mrs. A. H. Erod, Mrs. J. K. Wagner. Committees were named as follows: Committee on membership, Mrs. J. M. Peel, Mrs. W. E. Shepman, Mrs. A. H. Hoag; committee on printing, Mrs. E. Van Court, Mrs. Alfred D. Robinson, Mrs. C. E. Hilderbrand; committee on stud book and registration, Mrs. A. H. Hoag, Mrs. C. E. Martling.

### Chances for the Farmer Boy.

Prof. Thomas Shaw, of the Minnesota school of agriculture, says, in reply to a query addressed to him as to what he thought of farming as a business for an ambitious young man, that it is true that fortunes are made more commonly in lines other than farming, but that it is also true that they are made by men of commanding ability. The average man does not make these fortunes or get these honors, hence unless young men are quite sure that they have commanding ability, they should try and arrange to stay on the farm. But, says the professor, I do not mean to say that it is best for young men of great promise to leave the farm.

It is also true that the average man who stays on the farm makes more money than the average man who leaves it. And it is going to be true in future, as it has never been true before, that honors will come to intelligent farmers. Nearly all of the State legislators and a large proportion of the Congressmen of the future are going to come from the farms. Our advice to young men reared on the farm is to try and stay there. The bulk of the wealth of this country is going to consist of farm property. The happiest class in the future, as in the past, will be found upon the farms, and the farm is still going to be the best manufactory of brains in the world.

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AS much POTASH should be given back to the land as the crop takes from it. Thirty bushels of wheat remove thirty pounds of actual POTASH; therefore 500 pounds of a fertilizer with 6 per cent. actual POTASH would be needed to feed the crop and keep the soil productive.



We have books giving full information about the use of fertilizers and Potash, and will mail them FREE to any farmer who asks for them.

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The National Hay Press is an ALL METAL Press. Size of bale 17x22 inches, and any length desired.

The Power is constructed to give a complete circle of the horses, with two strokes of the pitman to each circle.

The Head Block is a heavy solid casting carried on trucks, with a long projecting shoe, so that under extreme pressure there can be no tipping back and breaking the pitman.

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Unequaled in residence construction.  
A protection against heat, cold, dampness, dust, draught and vermin.  
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—the faded out, yellow kind that are not doing well may be instantly revived by the application of a dressing of

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It acts at once because it is very soluble. This makes it instantly available as plant food; 100 to 200 lbs. per acre is sufficient for most crops.

This is the most concentrated fertilizer on the market.

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Race horses often become sore and stiff from continued strain on the hard tracks. Nothing takes out this stiffness and soreness like a wash compounded of diluted

### Tuttle's Elixir

apply to the legs and put on light bandages, sponge the body and put on light blanket. Guaranteed to produce desired results or money back.

Rendville Trotting Park, Mass., March 23, 1900.

Dr. S. A. Tuttle, V. S.  
Dear Sir:—I have used your Elixir for the past ten years. In the diluted form for a leg and body wash. I consider it the best wash for keeping horses from running up. Horses done up with this wash are much less liable to take cold than when done up with witch hazel or any other wash I ever used. J. H. NAY.

Our 100-page book, "Veterinary Experience," FREE. Tuttle's Elixir Co., 437 O'Farrell St., San Francisco, Cal. Beware of so-called Elixirs—none genuine but Tuttle's. Avoid all bilsters; they offer only temporary relief if any.

### List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
PIONEER PATENT SOLICITORS  
FOR PACIFIC COAST.

FOR THE WEEK ENDING JULY 17, 1900.

- 653,838.—EDUCATIONAL DEVICE—L. G. Belond, Stockton, Cal.  
653,653.—REIN HOLDER—M. Bohnert, San Diego, Cal.  
653,839.—IRONING BOARD—Wm. O. Bowman, Fairfield, Cal.  
853,842.—SYRINGE—A. J. Brown, Oakland, Cal.  
653,859.—PACKING—M. Bulkley, Oakland, Cal.  
653,860.—PUPPET VALVE—M. Bulkley, Oakland, Cal.  
653,861.—SHIP'S ANCHOR—J. Callow, New Kamilchi, Wash.  
653,661.—ROPE FASTENING—C. A. Conger, Oakland, Cal.  
653,800.—COLLAR STIFFENER—E. R. Gould, Spokane, Wash.  
653,772.—TACK DRIVER—G. W. Hobbs, Los Angeles, Cal.  
653,817.—HARVESTER LOCK—M. G. Morgan, Dixon, Cal.  
654,096.—TELEPHONE MOUTHPIECE—T. R. Owen, Los Angeles, Cal.  
653,779.—POCKET GUN—R. M. G. Phillips, Los Angeles, Cal.  
653,694.—CAR FENDER—G. B. Quarrier, Los Angeles, Cal.  
653,847.—COIN EXHIBITOR—J. M. Ricketts, San Jose, Cal.  
653,886.—NEEDLE—Lottie A. Roberts, S. F.  
653,706.—TUBE GRINDER—Scott & Hightower, S. F.  
653,705.—METAL BENDER—Scott & Hightower, S. F.  
653,972.—SHIPPING CRATE—Z. T. Stocks, Everett, Wash.  
653,758.—HAY STACKER—L. Stubblefield, Echo, Ogn.  
654,078.—WINDOW SHADE HANGER—H. H. Stratton, S. F.  
653,833.—SEEDER—A. V. Wilbur, Stockton, Cal.

### Notices of Recent Patents.

Among the patents recently obtained through Dewey, Strong & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

POTATO CUTTER.—No. 653,385. July 10, 1900. J. E. Howell and W. A. Chamberlain, Montague, Cal. This invention is designed for cutting and slicing potatoes into forms for cooking, such forms being known as "French fried" potatoes. It consists of a table or support having surfaces at different elevations, one of such surfaces provided with a longitudinally extending slot, vertical and horizontal knives are secured to the surfaces, and a slide including end heads and connecting sides for an open center adapted to receive the potato to be cut. A bolt passes through one of the heads and the slot and a cover confined between the heads and sides is hinged at one end to hold the article in place. By pushing the holder back and forward the potato is repeatedly brought into contact with the cutting knives and is thus sliced or cut into any desired form.

TRAVELING HARVESTER.—No. 653,465. July 10, 1900. Daniel Best, San Leandro, Cal. The object of this invention is to provide improvements in that class of machines known as traveling harvesters, in which the grain is cut, delivered to the thrashing cylinder, thrashed, separated and cleaned in continuous operations. The invention consists in improved means for connecting the header portion with the thrashing machine frame, and in means for transmitting power from the driving parts of a thrashing machine portion to drive the sickle carrying belt or draper reel and various parts of the header mechanism. The connection between the

header frame and the thrashing machine frame is effected by means of hooks upon one part and pins upon the adjacent part with which they engage and means for retaining them normally in position, but by which they can be easily released to disengage and separate the parts. In order to transmit power from the thrashing machine portion to the header to drive the sickle reel belts, etc., I employ a flexible belt or chain transmission with suitable guide and direction pulleys or sprockets so that whatever the change is in position between the two parts of the machine, the power will always be properly transmitted from one part to the other.

SAFETY LOCK FOR HARVESTERS.—No. 653,817. July 17, 1900. M. G. Morgan, Dixon, Cal. The object of this invention is to render harvesters and like large traveling machinery safe against accidents by reason of runaways. The invention consists of shoes with devices by which they are normally suspended in front of the main bearing wheels. A lever or like mechanism is connected with the suspending devices, so that if the team attempts to run away or the machine becomes unmanageable, these shoes may be dropped upon the ground in front of the wheels which run up on the shoes, so that the whole machine is supported upon the shoes and the wheels cannot revolve. In order to hold the shoes in place beneath the wheels they are connected with some part of the frame by stout chains which are only long enough to allow the wheels to roll up on the shoes where the latter are held in place.



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my 28-paged, sumptuously illustrated catalogue, which tells all about

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## Pacific Steel Handy Wagon.

WHEELS.....28 and 34 inches high.  
TIRES.....4 and 5 in. wide, 1/2 in. thick.  
AXLES.....1 1/2 inch, solid steel.  
BOLSTERS AND AXLE STOCKS. White oak.  
CAPACITY.....Guaranteed 5000 lbs.

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COE'S ECZEMA CURE \$1 at druggists. 25c size of us. Coe Chem. Co., Cleveland, O.

## Breeders' Directory.

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HOLSTEINS—Winners over Jerseys of EVERY butter contest at State Fairs for last six years. Aged 4-yr., 3-yr. and 2-yr.-old classes, except 1st on 2-yr.-old in 1895. Last year every butter prize awarded won by my herd, except 2nd for 2-yr.-olds, 21 Jerseys and Durhams competing. F. H. Burke, 626 Market St., S. F.

1 AYRSHIRE BULL, 2 AYRSHIRE HEIFERS registered, most fashionable strains; price, \$260.00. 1 Standard-Bred Nutwood Stallion, disposition perfect; price \$250.00. Owner going away. A. W. Canfield, Elmhurst, Cal.

BULLS—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times, either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

PETER SAXE & SON, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs. Correspondence solicited.

JERSEYS, HOLSTEINS & DURHAMS. Bred specially for use in Dairy. Thoroughbred Hogs, Poultry. William Niles & Co., Los Angeles, Cal. Breeders and Exporters. Established 1876.

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WELLINGTON'S IMPROVED EGG FOOD for poultry. Every grocer and merchant keeps it.

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is the original and successful preventive remedy for

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Write for particulars, official endorsements and testimonials from stock raisers who have successfully used PASTEUR ANTHRAX VACCINE in the United States since 1895 and protected their stock against Anthrax.

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## THE LYNWOOD HERD OF SWINE

has been pretty well cleaned out of salable pigs and we have but a few young litters on hand. Our stock is now being put into show condition and we cordially invite every visitor to the State Fair to call at our pens and see the kind of stock we keep. It has always been one of the sights of the Fair and we hope to improve on former exhibits.

In answer to inquiries we will describe any stock we think will suit you.

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## DEWEY, STRONG & Co.,

### PATENT SOLICITORS,

330 MARKET STREET, - SAN FRANCISCO, CAL.

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced first-class agency. We have able and trustworthy associates and agents in Washington and the capital cities of the principal nations of the world. In connection with our scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us to give advice which will save inventors the expense of applying for patents upon inventions which are not new. Circulars and advice sent free on receipt of postage. Address DEWEY, STRONG & CO., Patent Agents, 330 Market St., San Francisco, Cal.

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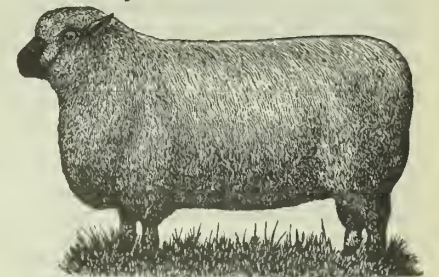
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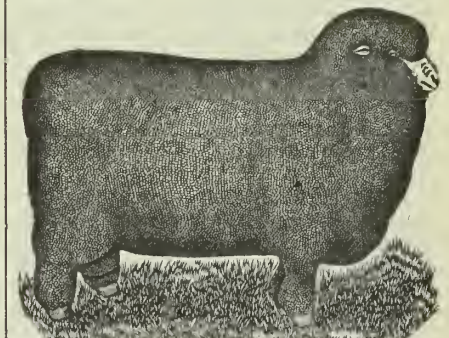
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Importer and Breeder of Shropshire Sheep.

They were all imported from England, or bred direct from imported stock.



We have also bred American Merinos—Hornless Sheep—for 30 years. They are a large sheep, without wrinkles. Rams will produce 20 to 25 pounds of long, white wool yearly. Sheep of both sexes for sale.



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316 MONTGOMERY STREET,

Bet. California and Pine, SAN FRANCISCO, CAL.



## AGRICULTURAL SCIENCE

### Utilization of Sugar-Beet Waste as Manure.

This is a matter of growing importance in this State. Consul Murphy of Magdeburg, in his last report to the State Department, states that until recently no satisfactory process has been found for utilizing the waste materials which accumulate so rapidly in German beet sugar factories. The questions found most difficult to solve were: 1. How to reduce to useful form the valuable ingredients remaining in the mass. 2. How to obviate the unpleasant odors. 3. How to safely dispose of the dangerous waste water.

These difficulties were seriously felt, especially in establishments producing sugar or alcohol from molasses, the residuum known as brown lye or molasses dregs being a substance which it was found difficult to dispose of satisfactorily. When emptied into rivers, either directly or through sewers it is said that a certain result was the death of a small percentage of the fish in such streams. When the lye was reduced to saline (Schlempekohle) or potash, the products of combustion escaping through the chimney spread odors so offensive as to cause annoyance and discomfort in the vicinity. It is now claimed that these evil smelling products of combustion contain valuable manure stuffs, and, further, that the manuring of fields with waste material of this sort is advantageous, because the soil thus receives back in easily assimilable form useful matter of which the beet deprived it in its growth, especially potassium and nitrogen. This molasses lye can not, however, be conveniently used as manure, owing to the fact that the large quantity of water which it contains makes its transportation too expensive. Furthermore, it can not be used in a concentrated state on account of its inconveniently stiff and sirupy form.

It is accordingly interesting to learn that a process has recently been invented which, it is alleged, obviates all the difficulties mentioned above, including bad odors, dangerous waste water, and inconvenient form. By this process molasses lye is changed into a dry substance which can be stored and eventually easily scattered over fields. A recent issue of the Hanover Journal of Agriculture and Forestry gives the following analyses of the product: Nitrogen, 3.22%, of which 2.74% is nitrogen soluble in water (of this 0.7% is ammonia nitrogen and 0.09% salt-peter nitrogen); phosphoric acid, 0.13%, of which 0.04% is phosphoric acid soluble in water; potash (soluble) 10.74%; carbonate of lime, 25.99%.

The value of the manure is 3.05 marks (72.59 cents) per centner (110 pounds). It is said that molasses sugar refineries and molasses distilleries will be able to secure higher net profits from this manure than now result from the manufacture of saline and potash, and that the process is of considerable value from a hygienic standpoint. The inventor believes that the application of the process can be extended to waste materials of other industries, and perhaps also to sewage matter.

### Peach Leaf Curl: Its Nature and Treatment.

The losses arising from peach leaf curl frequently amount to several millions of dollars annually. For the purpose of placing before the peach growers of the United States the results of experiments conducted during several years past for the prevention of this disease, the U. S. Department of Agriculture has had prepared and will soon issue Bulletin No. 20, Division of Vegetable Physiology and Pathology, entitled "Peach Leaf Curl: Its Nature and Treatment."

The bulletin was prepared by Newton B. Pierce, in charge of the Pacific Coast Laboratory at Santa Ana, California, and it is believed that a wide dissemination of the results obtained by the experiments outlined in the bulletin will lead to a large saving to the peach industry. During the progress of the

work over sixteen hundred peach growers in all peach-growing States were requested to test the preventive measures recommended. A large number complied with the request and some of the more important results of their work are also given.

The bulletin is divided into eleven chapters under the following heads: Primary considerations relative to peach leaf curl; nature of peach leaf curl; history of the treatment of peach leaf curl; plan of preventive spray work conducted by the Department; influence of sprays on the vegetation of the trees; influence of sprays on the fruiting of the trees; preventive spray work conducted by orchardists; preparation, composition and general characters of the sprays used; the application of sprays; nature and source of the spraying material used; peach varieties and nursery stock in relation to curl.

The conclusions reached are that peach leaf curl may be prevented with an ease, certainty and cheapness rarely attained in the treatment of any serious disease of plants, and there is no longer a necessity for the losses annually sustained from it in the United States. The bulletin contains thirty plates and ten text figures. An extra edition of 17,500 copies has been ordered by Congress for distribution by Senators, Representatives and Delegates in Congress.

## SHEEP AND WOOL.

### Sheep Shearing in California.

This is the season when the second and final sheep shearing at Firebaugh and along the pastures of the San Joaquin, in this county, and in its neighbor, Merced, is in full swing. Firebaugh is a lively town now, but it is a good place for a young man of sedate habits and conservative puritanical ideas to stay away from till all the sheep have been sheared and the mixed Indian, Mexican and unclassified population engaged in the work have folded their tents, and, like the traditional Arab, stolen silently away.

The first sheep shearing occurs in April and is comparatively a small affair, though the fleeces are then pretty long. The second season commences in June and lasts about five weeks.

It is at this season, when the days are hot and sultry and the nights breezy and cool, and the conditions are favorable to persons of noctivagant habits, that the half-breed seniors and senoritas enjoy about the same high old time that is had by the people of Maryland and Virginia at corn husking about the end of September.

After the day's shearing is over, the Firebaugh lads, principally of Spanish descent, with considerable variety of pedigree, turn out in the various saloons to inaugurate a hallelujah time. Saturday night is a specialty, and it is seldom indeed that the fun is over till old Sol peers over the Sierra crests about 5 A. M. on Sunday.

Sheep are shorn by the piece, and there is no prejudice against any man by reason of creed, nationality or color. The sheep shearer may be anything he pleases in the way of parentage, race or religion if he can shear six to eight sheep an hour. A corral is arranged, the sheep are driven in and the shearer throws the sheep to the ground in a way not to injure or break its limbs, but strictly on the "catch as catch can" proposition. A good shearer will have his sheep shorn in six or seven minutes and receive about 7 cents for the job. He turns over the fleece and it is checked or tallied against him. In this way a larger number of sheep is handled daily and the work goes merrily on. The men are supposed to be paid by the month, but they can get all the advances they want, if only from the local saloon men and others. With a few possible exceptions Firebaugh more nearly represents a California town of the days when Charles A. Dana wrote "Two Years Before the Mast" than any town in the State, and the sound of the guitar and marimba and the spectacle of the fandango may be

beheld there any time in the shearing season.

The quaint old Mexican shanties on the river bottom still remain, relics of a day when the San Joaquin had a playful habit of rising 10 feet in a night, so that the shanties were expressly constructed for removal to higher ground at short notice. With the increased demands for irrigation the flood season has altogether passed away, but the shanties still remain, and in the shearing season their surroundings are as artistic and picturesque as the abode of the Calabrians when Regnier vainly sought to introduce the "idees Napoleonniques" into that liberty-loving and free-and-easy community in the early days of the century.—Fresno Democrat.

## FRUIT PRESERVATION.

### Points on Prunes.

A bulletin by President H. G. Bond of the California Cured Fruit Association gives the following suggestion on what are satisfactory prunes:

1. There will be two classes of graded prunes, designated as "first quality" and "second quality."

2. No prunes will be received as first quality unless thoroughly cured and free from cracked, immature or otherwise defective or imperfect fruit.

3. All fruit delivered at the warehouses containing unripe, cracked or otherwise defective fruit will be designated as "second quality."

It is important, therefore, that every grower should remove all blighted or imperfect prunes from the ground before the first picking; also that he insist upon his fruit trees not being shaken until the last picking, as green fruit is sure to fall with the ripe, and its mixture with fruit of better quality will reduce the latter to the "second quality." The management suggests that cracked or otherwise defective fruit be separated from that of the first quality at the time of picking. In case it is overlooked, then it should be picked from the trays before the fruit is placed in boxes or sacks.

The association will incur considerable expense with a view to securing a perfect inspection of the fruit delivered at the warehouses. In no other way can the best price be obtained, and in no other manner can the association establish a brand that will have a commercial value. Any attempt, therefore, on the part of the grower to mix poor fruit with good for the purpose of securing larger tonnage will inevitably result in pecuniary loss to himself.

The management earnestly requests every member to give this matter careful attention, to the end that he may not be disappointed when his fruit is inspected, and that he may assist the association in establishing a high character for its pack. No fruit will be received at the warehouses that is not fit for consumption. Every grower can readily determine whether his fruit is of proper quality by judging whether it would be fit for use in his own family.

A. W. CANFIELD, a prominent resident of Santa Barbara and an old reader and correspondent of the PACIFIC RURAL PRESS, has lately moved his residence to Elmhurst, Alameda county, where he has secured a fine suburban farm, upon which he can gratify his taste for live stock and other excellent agricultural things, some of which he offers in our advertising columns.

CHANGE OF NAME.—S. F. Call, Aug. 1: Judge Dunne has granted leave to the Horse Show Association of the Pacific Coast to change its name to the San Francisco & San Mateo Agricultural Association.

### How's This?

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRAU, Wholesale Druggists, Toledo, O. WARDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Testimonials sent free. Price 75c. per bottle. Sold by all Druggists. Hall's Family Pills are the best.

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May  
Need

**Pain-Killer**

For  
Cuts  
Burns  
Bruises

Cramps  
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All Bowel  
Complaints

It is a sure, safe and quick remedy.

There's **ONLY ONE**

**Pain-Killer**

Perry Davis'

Two sizes, 25c. and 50c.

### Rigid Test for Matrimony.

Both in the northern and western islands of Scotland the natives have some peculiar customs unfamiliar to the dwellers of the main land. One of these, known as the "marriage test," is practiced in the island of St. Kilda, where the population barely exceeds a hundred. The desire among the islands to increase this number does not seem to be exceptionally strong, and every man before he is deemed suitable for a husband has to perform an evolution with no little bodily risk. The St. Kildans are, of course, adept rock climbers, and the aspirant for matrimony is therefore subjected to the test of balancing himself on one leg on a narrow ledge overhanging a precipice, bending his body at the same time in order to hold the foot of his other leg in his hands. If found lacking in courage the maiden withdraws her betrothal, and should the man fall over the ledge it is presumed that, in his case, he will be disqualified.

### Farm Wagon only \$21.95.

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Company, Quincy, Ill., have placed upon the market a Farmer's Handy Wagon, that is only 25 inches high, fitted with 24 and 30-inch wheels with 4-inch tire, and sold for only \$21.95.



This wagon is made of the best material throughout, and really costs but a trifle more than a set of new wheels, and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

## Feeds and Feeding.

By W. A. HENRY.

This is a practical, thorough and complete work based on what has been done: a record of solid facts. Every Feeder, Breeder or Farmer should have it for every-day reference.

657 PAGES, BOUND IN CLOTH.  
Price, \$2 Postpaid.

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330 MARKET ST., SAN FRANCISCO.

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"Greenbank" Powdered Caustic Soda and Pure Potash.

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Sole Agents, - No. 123 California Street,  
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BLAKE, MOFFITT & TOWNE, Los Angeles.  
BLAKE McFALL & CO., Portland, Or.







## THE VETERINARIAN.

### Poisonous Effects of Sorghum.

TO THE EDITOR:—A great many letters have come to the Experiment Station asking for advice as to pasturing sorghum. The publicity given to the injurious effects of sorghum through the investigations carried on by this Station to ascertain the cause has moved people not heretofore acquainted with this occasionally exhibited peculiarity of the plant to become suspicious of it. While no further positive information has been obtained on the subject, there yet remains a word or two that may be profitably spoken.

The records of this Station do not show any cases of sudden death from sorghum occurring in the eastern portion of Nebraska, with the exception of a few which occurred on second growth sorghum. There is also reason to believe that plants producing this disastrous effect have not made a healthy growth, and are yellow and wilted—a condition easily detected by the farmer. It would therefore seem reasonable to conclude that no danger is to be encountered in pasturing sorghum of healthy growth in eastern Nebraska.

Again it would appear that no danger is incurred if the sorghum is fed after cutting and allowing to lie for some time. A sample of sorghum was recently received by the Station with a letter accompanying it, stating that the plants were parts of a very few partially eaten by a cow which was killed by them in two minutes. The sample was fed to a cow on the Station farm without injuring her in the least. This, together with the fact that no poison has been detected in samples sent to the Station for analysis, would indicate that any toxic substances which the plants might have contained have become dissipated after cutting. The length of time required for this is not known, but it is certainly accomplished in a few days.

As sorghum is undoubtedly the best annual midsummer forage crop for this region, it is important that its limitations should be well defined. The use of healthy sorghum for pasturage with the ordinary precautions in eastern Nebraska and of sorghum hay may be considered safe.

T. L. LYON.  
Nebraska Experiment Station, Lincoln.

### Answers by Dr. Creely.

#### FOR AN OPEN WOUND.

TO THE EDITOR:—I have a horse which had its foot quite badly cut with barbed wire fencing. The wound was not kept bound up properly, and healing from the bottom it has left a raw spot 1½ or 2 inches wide, which has on it somewhat granulated or proud flesh. I am afraid it will callous over and continue to grow, wart like, as I had a similar wound do a few years ago and which I had to have pared down and burned. Can I do anything to prevent this or should it be burned over?

—E. C. COBURN, Penryn.  
Pare off and apply once daily over raw surface stick nitrate of silver.  
DR. CREELY.

### Black Leg.

This disease, although most troublesome in the spring and fall, is also liable to break out during the summer. However, calves can be protected against black leg with black leg vaccine, in the same way that human beings are protected against smallpox with smallpox vaccine. Following Pasteur's discovery of anthrax vaccine, the black leg (symptomatic anthrax) vaccine was developed by Arloing, Cornevin and Thomas. For some years these celebrated scientists have been associated with the Pasteur Vaccine Co. of Paris,

Fance, and Chicago, Ill., who introduced the vaccine into North America in 1895. Their success in the United States is phenomenal, nearly 2,000,000 calves in the United States and Canada having been duly protected against black leg with the Pasteur Co.'s vaccine during the last five years. An interesting volume containing full particulars regarding black leg and its preventive treatment with Pasteur vaccine, as well as of official endorsements and a large number of testimonials from prominent American stock raisers, will be mailed free upon application to Pasteur Vaccine Co., Chicago, or to its branch offices at St. Paul, Omaha, Kansas City, Fort Worth and San Francisco.

### Investigating Hawaiian Conditions.

In the Act making appropriations for the U. S. Department of Agriculture for the present fiscal year Congress provided for the inauguration of experiment stations in the islands of Hawaii and Porto Rico. In accordance with this provision the department has taken preliminary steps to determine the best plan of operation in each case and the subjects which are in most need of immediate attention. The work has been placed in charge of the Office of Experiment Stations.

Dr. W. C. Stubbs, director of the Louisiana Experiment Stations, will make the preliminary survey of the conditions in the Hawaiian Islands. He sailed for Hawaii about the middle of July and will spend the month of August in the islands. The conditions there differ from those in Porto Rico, as a station for experiments in sugar production has been maintained by private beneficence for a number of years. The lines in which investigation is most needed—the possibility of greater diversification of agriculture, the expense of the work and the means of disseminating information will be carefully inquired into. This will probably prove a profitable field for investigations on the use and economy of water in irrigation, since, according to reliable reports, in no other place is so much money expended for pumping water for irrigation. Some pumps are said to be raising 30,000,000 gallons of water per day from a depth of 500 feet, and the expense of irrigating in some cases reaches as high as \$125 per acre annually.

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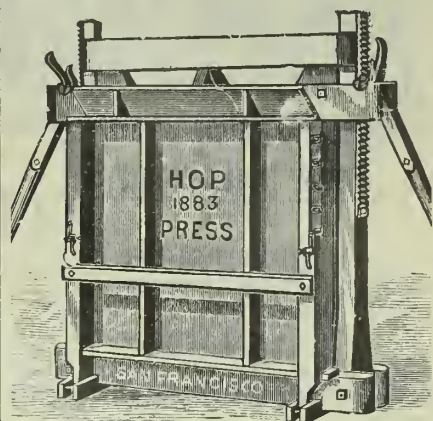
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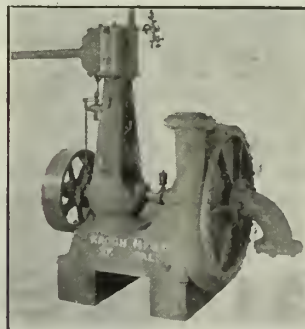
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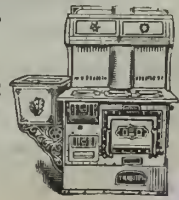
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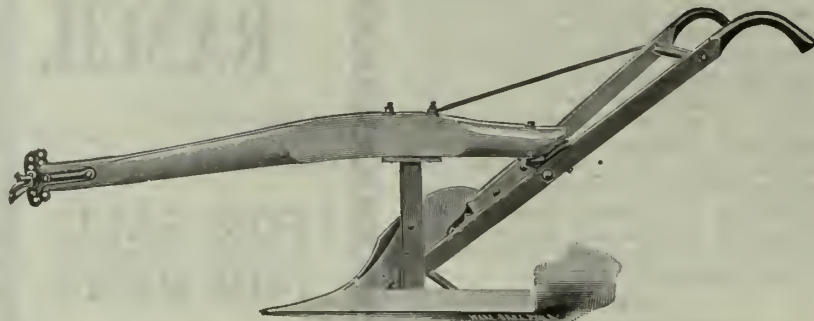




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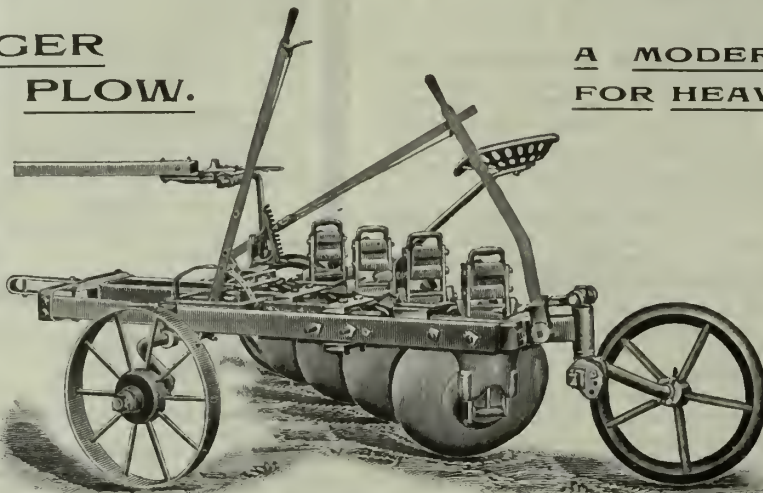
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 6.

SAN FRANCISCO, SATURDAY, AUGUST 11, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

### The Citrus Fruit Interest.

We alluded last week to the beneficent contribution made to the prosperity of California this year by the citrus fruit interest. The south has suffered from insufficient rainfall and has been subjected to some hardships, and has suffered some restriction to her splendid progress and development. And yet so magnificent has been the courage and determination of her people, and so fertile their resources of pluck and insight, that they have rescued their leading interests from injury and beneath dry skies have developed subterranean water, to supplement a scant surface supply, with such intelligence and zeal that they can show an output in one interest alone reaching a



Orange Orchards in the Riverside Region.

whole leave the southern counties much stronger and more capable than they were before the three years of drouth began. We count it one of the greatest instances of industrial energy and heroism within our knowledge, and it reflects great credit upon the abilities, devotion and financial strength of the people who have made southern California what she is to-day.

The service rendered to California by the citrus fruit interest by the output of nearly 19,000 carloads during the year, which will end with October next, naturally suggests some further reference to this branch of our fruit industry. A very important contribution to the proper understanding of this interest has just been made by Mr. B. M. Lelong, secretary of the State Board of Horticulture, in the compilation of a special report on "Citrus Culture in California."

Mr. Lelong has been familiar from his youth with this branch of horticulture, and he has made it the subject of constant study and observation in all parts of the United States for the last twenty years. He has done much good work during his connection with the State Board of Horticulture, but we consider this his best achievement, and it is as timely as it is good. The limit placed upon the printing of such documents enables them to reach only a fraction of those interested, and we think so well of it that we propose to add our large circulation to the dissemination of what we consider the most widely pertinent portions of the report. For that purpose we are accorded the privilege of reproducing such plates as we see fit, and we are sure that all the matter which we

shall from time to time present will be welcome to our readers interested in citrus fruit culture in the various semi-tropical regions of the world. On another page will be found a very careful sketch by Mr. Lelong of the historical and geographical distribution of the citrus fruit plantations of California.



The Washington Navel (Reduced)—The Orange Which has Made California Famous

value of nearly eight millions of dollars. They have saved their citrus fruit trees and other trees which they counted most profitable, and have rendered their part of the State practically drouth-proof. We are aware that it has cost great sacrifices of rest and comfort, but we believe the experience will on the



The Old Wolfskill Orchard, Los Angeles; Trees Forty Years Old.



The Old Orange Tree at Bidwell's Bar, Butte County.



Orange Avenue Thirty Years Old at San Gabriel, Los Angeles County.



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E. J. WICKSON.....Horticultural Editor.

San Francisco, August 11, 1900.

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## The Week.

The fruit crop is being harvested for a rising market, which is very pleasant to the man who finds his weights and measures holding out, but some are losing more on their estimated weight than they are gaining in value. The experience is rather common. The yields are generally overestimated and the price depressed accordingly. We have tried to warn our readers all along that this condition was likely to be realized, and we hope they did not sell too low. Now there is a rush for apricots, peaches, almonds and pears, and canners and dried-fruit dealers are paying well for what they need to fill their orders or to fill their stock. Everything really good in the fruit line is evidently worth something this year.

Wheat is unchanged, though options have fluctuated widely on bad weather reports from Europe. Grain shippers are doing more in barley than wheat just now; three cargoes, including 10,000 tons of brewing barley, have cleared for Europe to help out the ale supply in that part of the world. Oats are firm and the trade has a healthy tone; few are offering and many are going to Asia, on steamers clearing for Japan—a thousand tons on two steamers. Corn is strong; but little Eastern coming, and that sold to arrive. There is no change in rye; but that grain will also probably figure in exports, as it is mentioned in charters for ships now in port. Hay shows smaller arrivals, and the situation will soon clear if that continues and values improve. Feed-stuffs are unchanged, aside from an advance in rolled barley. Beef and mutton are steady and hogs are firm, with Eastern receipts likely to cease. Butter is higher for fancy fresh; cheese and eggs are steady, with many Eastern eggs rolling westward. Poultry is a shade better for choice young stock, and all kinds clearing up well. Potatoes and onions are drooping, owing to light demand. Dry beans have a fair movement. Canners have advanced prices on peaches and choice pears are very scarce. Almonds are strong, and shelled almonds high. Lemons are in freer supply, but prices hold well. Dried apricots are active, and choice to fancy are scarce. The dried peach market is in better tone and confident with a good outlook. A few early dried apples meet a fair inquiry for local account. Old prunes are about cleared

up. Bright free wool, fit to ship in the grease, is selling at full current rates. Two heavy buyers are now taking all they can get of this description.

## The World's Wheat.

Wheat seems to have emerged from the period of midsummer madness and to have reached a steady behavior, due to a better understanding of the general situation. It is apparent now that a considerable shortage of crop through weather injuries to the spring wheat product of the central Northwest will not be realized. Ample rains in July rescued a good part of the acreage from what seemed in June to be wide destruction, and a good July does great things for a crop in a region where the season is so late as it is in Minnesota and the Dakotas. The Orange Judd Farmer of last week believes that the yield in these States will not be over 50,000,000 bushels short instead of about twice as much as apprehended on July 1. It also places the amount available for export from the United States at from 410,000,000 to 425,000,000 bushels during the coming export year.

This amount of wheat justifies the European buyers for their stolid demeanor during the period of our July sensations, when they refused to become excited by our report of shortages. But the reason for their stolidity was the fact that other supply countries had fair prospects and could make up for American lack. There seems to be, in fact, a prospect that the world will not go hungry for wheat this year. The Orange Judd Farmer cites a compilation made by three leading authorities on grain supply which presents figures of the world's visible supply of wheat covering a long series of years. This statement in round millions of bushels on July 1 of each year named is shown in the subjoined table:

	1900.	1899.	1898.	1897.	1896.	1895.	1894.	1893.
U. S. and Canada..	85	71	27	38	76	72	86	95
United Kingdom.	18	14	10	17	14	18	20	22
Continent..	15	18	18	18	19	28	28	22
Afloat.....	32	37	32	16	28	44	39	45
Total..	150	140	87	89	137	162	173	184

This shows a good amount of wheat—more than for four years back, but less than during the first half of this decade, when there seemed to be too much wheat for any apparent use. We are not, then, to have famine prices, nor are we to be depressed by a large surplus. There is enough for a fair trade and it should be done at fair prices. It is apparent, also, that the American product is the ruling factor, and any interference with its free movement to Europe would advance market values abroad.

The situation as to crop, movement and prices, as compared with several years preceding, is also shown by the Orange Judd Farmer. The exports of wheat and flour during the fiscal year just closed were liberal—178,000,000 bushels—but smaller than the splendid showing of the previous year—220,000,000. Exports so far this crop year since July 1 have been running a little smaller than twelve months ago, yet decidedly better than two, three and four years ago. The following table gives the domestic wheat crop, movement and prices in millions of bushels:

Season.	Crop.	Ex- ports.	CHICAGO PRICES		
			July.	Sept.	Dec.
1900-01..	...	...	75@79c	...	...
1899-00..	565	188	69@75	69@75c	66@69c
1898-99..	715	220	65@88	62@68	63@70
1897-98..	589	216	68@80	85@101	82@109
1896-97..	470	148	54@62	55@70	74@93
1895-96..	460	130	61@75	55@65	54@60
1894-95..	460	144	50@60	50@56	52@57
1893-94..	400	165	54@66	62@70	59@65

There are several conditions which should be taken as justifying the higher prices now ruling, as compared with last year, and warrant, also, as it seems to us, some improvement during the coming months. We have this year to feed a nation which is alive and active in all its industrial affairs. We doubt if the local consumption has ever been so large as it may reasonably be expected to be this year. There is plenty of money in circulation, and the American appetite will have as good an opportunity to gratify itself as it ever had. Another consideration which will influence prices is the condition of the wheat growers in the great central States of the Union and their ability to hold back the portion of the visible supply now in their hands. On this point the Farmer says: "One fact which will continue to possess weight is the comparatively bullish disposition of wheat grow-

ers, not only in this country but in Europe. Our own farmers, as a class, are perhaps as well fixed financially as in a long time, and many of them able to hold their wheat, or at least market it conservatively, instead of pushing out the product so rapidly as to disturb values."

A factor in the local situation on this coast is the condition of affairs on the east coast of Asia. It is impossible to tell yet what the stimulation of export of staples westward from Pacific coast ports will be, but the large increase of the foreign population which armies of traders and tourists and armies of fighters will occasion, must make a considerable call upon this part of the country. The United States will be shipping breadstuffs in large volume all the year across both oceans, and, with stimulated consumption at home and a moderate product to dispose of, instead of an immense one, we can not see any course for prices but a sound one. The sensation of the season seems to have passed in July, and the feeling the rest of the year should be confident and strong.

INDICATIONS are for a considerable reduction in the hop output. At the meeting of the Executive Committee of the Hop Growers' Association in Sacramento on Saturday last, reports from some of the prominent growers of Sonoma, Mendocino, Santa Cruz and Lake counties were to the effect that the crop was short from 25% to 50% in different sections, and the outlook in Sacramento, Yolo and vicinity was said to indicate a falling off of at least one-third, according to the estimates of the different growers in those sections. The directors, after considering the reports of the different sections of the State, in regard to crop prospects, concluded that, inasmuch as nature had reduced the surplus to such an extent, it would not be necessary to carry out the plans of the association for the coming season. Consequently, it was decided to adjourn until after the harvesting season, at which time the work will be resumed and carried out to completion. Thus nature steps in and frees the hop growers from the necessity of reducing their output this year.

We printed an item recently from Lassen county showing how the investigation by agents under Prof. Elwood Mead had found water appropriations in Honey Lake basin calling for more water than the whole State possessed, or something of that kind. The conflict between excessive appropriations prevents the use of what water there actually is. J. M. Wilson, who has been making the inquiry, now tells the Chronicle that many irrigation ditches have fallen into decay, because of the interminable legislation in which the claimants had become involved through the present indefinite laws of appropriation. There is much fertile land in the district that would net large incomes, but the water claimants are at law with each other and none of them is certain of his water holdings. "What the State most needs," says Mr. Wilson, "is an authoritative definition of water rights already acquired; control in the establishment of subsequent rights, and a law of efficient distribution of waters upon the basis of the rights defined."

THE appointment of Leroy Anderson of Cornell as instructor in dairy husbandry by the University of California has been greatly appreciated by the farming interests of the State. President Wheeler has received from Secretary James R. Boal of the Dairy-men's Association of Southern California resolutions adopted at their annual meeting in Los Angeles cordially commending the president and regents of the University of California, and most earnestly appealing for the establishment in connection with the college of agriculture of "a dairy school in which shall be taught everything that pertains to the interests of the dairymen in this State." Mr. Anderson is expected to arrive in Berkeley within a few days, and to enter at once upon his work.

It seems certain that the grape crop in the Fresno district will be short and may even fall below that of last year; in fact, the first rough estimate has been cut nearly in half. Thrips, red spider, white mite and sunburn have done great damage in vineyards east of the town, and it is doubtful if the raisin crop will amount to more than two-thirds of that of last year. The shortage will extend to grapes of all kinds.



QUERIES AND REPLIES.

Pruning Apricots.

TO THE EDITOR:—I have finished my apricot harvest and feel that I should give my six-year-old trees a severe pruning now in order to decrease, as far as possible, the evaporating surface, thereby making the moisture available for the development of fruit buds that would otherwise be dissipated into the air. The operation would be much simplified and certainly made more heroic by cutting below the last winter's pruning—into the old wood. Would such plan injure the tree, as a great many seem to think, and would the young growth that would probably be thrown out by such treatment be hurtful, even though it had no time to harden before winter? Of course, this is suggested by the drought and the fact that, although I think the trees have been pruned rationally before, there is a long, bare limb below the last winter's pruning, devoid this season of both fruit and foliage, although the new growth is from 3 to 4 feet long on top and around the sides.—GROWER, Southern California.

We see no objection to cutting back into the old wood, as you propose doing; in fact, we believe it is often good practice and do not hesitate to do it on our own trees. However, in cutting into the old wood wherever it is possible we should go further than you propose to go—just below the new wood—and would cut back to a lateral on the old wood, if possible, even though it be a rather small one. This has a tendency to prevent the break of a great many buds around the stub and, therefore, prevents the formation of an excessive number of shoots. Where it seems necessary to cut into the old wood at a point where there is no lateral, it is desirable to go over the tree afterwards and thin out the surplus shoots by rubbing off those which it is not desirable to retain. Cutting into the old wood in pruning of bearing trees is hardly avoidable; otherwise the trees would soon be out of reach and too straggly to sustain their burden, and we see no objection to doing it just after the fruit is harvested. In most localities in California wood which shoots out now will be sufficiently matured to endure the light frosts of our winters.

A Falling Out in the Elm Family.

TO THE EDITOR:—I send you a portion of stock and scion of cork bark elm grafted with white elm. The tree blew over from want of adequate support and broke just where the graft had been made. I cannot say whether the graft was made in 1899 or last spring, but the head was very large and the growth vigorous. Take it apart and you will see the progress that had been made in uniting stock and scion, and please tell me whether you think the union promised to be a good one, or unperfect, like apricot on almond, which I have seen broken by a mere puff of wind when 3 inches thick.—JOHN T. DOYLE, Menlo Park.

The specimen seems to indicate a lack of affinity between the two members of the elm family. The union had grown to a diameter of about 1½ inches, and yet when the strain came the two woods parted cleanly, showing that they had abutted closely upon each other and maintained cellular connection and sap flow, but had not intergrown. Where a union is perfect there is strength in the tissue and splintering if it is broken—not a clean parting. The graft looks as though it were two years old and should have acquired some strength. It is true that the union might have become stronger as it grew older, but it looks to us exactly like cases of apricot or almond which we also have seen cleanly separate after becoming 3 or more inches in diameter.

We do not find in works on grafting any mention of discord in the elm family. We shall be glad to hear from any readers who have had experience in grafting elms.

A Book on Canning.

TO THE EDITOR:—I have your books on "California Fruits and Vegetables;" have you a book on canning fruits and vegetables, or is there one that you can recommend?—READER, New Zealand.

We know of no book which satisfactorily treats of canning fruits and vegetables on an up-to-date, commercial scale. There are small booklets on canning, jam and jelly making, but, so far as we know them, they pertain rather to the kitchen than the cannery. It would be very hard to make a satisfactory work of this kind, because machinery and methods are being constantly improved and because so much of the knowledge employed is either guarded as trade secrets or locked up in caskets of experience and

judgment. There might be a very interesting popular book made by one who had the requisite knowledge, but if too popular it would not be industrially explicit enough, and if satisfactorily technical none but cannery managers could make any use of it.

Our Red Spiders.

TO THE EDITOR:—If you have "red spiders" so bad in California why cannot some one be induced to send some of them to us? Within the past year Prof. Woodworth, Prof. Cook, Prof. Piper and Prof. Doane have visited this division and have been spoken to regarding "red spiders." All have promised to send material, and several gave the names of others who could send specimens. These were written to; nothing has been received. The opinion of several entomologists who have visited California is that your "red spiders" are "clover mites"—Bryobia and not Tetranychus. Profs. Cook and Woodworth told us much about the theories regarding "yellow mite" and "red spider." But without specimens in first-class condition it is absolutely impossible to make any definite statement as to what is their scientific position. There are undoubtedly many other species of Tetranychus in the United States; and I am personally of the opinion that the genus occurs in California, since it is found in nearly every part of the world where it has been looked for, and I would be very thankful for specimens, which should be sent mounted in balsam on glass slides.—NATHAN BANKS, Division of Entomology, Department of Agriculture, Washington, D. C.

This is a fair answer to our complaint in the PACIFIC RURAL PRESS of July 28 that Mr. Banks did not put our species in his "Red Spiders of the United States." We hope all will send him specimens of our mites, red, yellow or 'alf and 'alf, and let us see if we cannot get their standing established. We can think of many readers in all parts of the State who ought to send specimens to Mr. Banks at once. If all cannot balsam mount the specimens, send them on leaves and twigs in small tin boxes by mail.

California Lotus.

TO THE EDITOR:—I inclose a part of a plant growing all about here and I believe over a good part of the State. What is it? Does it belong to the clover family? If not, is it a nitrogen gatherer? It seems to be a very good drouth resister.—E. C. COBURN, Penryn.

Mr. Davy of the University identifies the specimen as the California lotus (Lotus Americanus) of the pea and clover family. It is a good nitrogen gatherer, but is considered not good for orchards, as it grows and flowers too late in the season, thus withdrawing too much moisture from the soil. Where it makes a heavy early growth it would be good for plowing under, and it is a fairly good forage plant.

Aphis on the Orange.

TO THE EDITOR:—I send an orange twig taken from a tree in General W. S. Green's yard, showing some kind of insect which we are unable to determine. Will you kindly inform us what it is? Sulphur seems to have no effect on it whatever. Is it dangerous, and, if so, what is the remedy?—J. B. DEJARNATT, Colusa.

The insect is an aphis of a species with which we are not familiar. It is injurious, but fortunately can be easily killed by spraying. Whale oil soap, one-quarter pound to the gallon of water, thoroughly sprayed on the affected parts, will destroy it, or kerosene emulsion will do as well.

Snails or Slugs Again.

TO THE EDITOR:—I am working for a gentleman who has a fine garden which is badly infested with snails or slugs—which is the right name? I have been catching them every night, but I cannot clear them out. I spread cabbage leaves around the plants and then collect and kill the slugs. Is there any better way? I can keep them down by working every night, but is there not an easier way?—GARDENER, Tuolumne county.

The reduction of snails, or slugs, in the garden is quite a difficult proposition, as you state. Your plan of trapping them with cabbage leaves is very good. If you should dip the cabbage or lettuce leaves, which you use, in paris green water, the slugs would then kill themselves and save you the trouble. Use about half an ounce of paris green to 5 gallons of water; keep it thoroughly stirred, dip the leaves in it and put them in place in the evening, and all the insects that bite it will be killed.

You will find that keeping a loose, dry surface soil, will very much reduce the injuries from these pests. They do not seem to move very freely, or very far, over loose, dry soil. If you can irrigate in small

trenches and then thoroughly hoe or rake up the ground after the water has sunk in, the sun will dry the surface, the snails will be very much hampered in their work and at the same time the plants will grow well because there is plenty of moisture underneath.

As to whether the proper name is "snails" or "slugs," the term "slug" is preferable, because it is the correct designation of the molluscs which have no apparent shells, while the snails pack their houses on their backs.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending August 6, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

Normal weather conditions have continued through the week. Grain harvest is still in progress, with no improvement in the yield. Some sections report that there will be only half the usual crop. Peaches are dropping in a few orchards, and some damage was done to this fruit by high winds in the vicinity of Vacaville, but the yield will be abundant in nearly all places. In Tehama county the deciduous fruit crop will be the largest ever known, but there is some danger that it may not be all gathered, owing to the scarcity of labor. French prunes are looking well, and are nearly ready for market. Grapes are in excellent condition; prospects are good for a large crop. Almonds are being gathered; there is a good crop.

COAST AND BAY SECTIONS.

Unusually high temperatures prevailed from the 1st to the 3d, causing fruit to ripen rapidly, and in some places it is reported that the hot, dry winds did considerable damage to tomato vines, grapes and prunes. Deciduous fruits are being gathered; drying, canning and shipping are progressing; the yield throughout the section will be nearly average, though light in some localities; in Napa county the prune crop is said to be immense, and picking will commence during the week. Grapes are looking well in most places, and will probably yield a good crop in the northern counties. Beetles are injuring potatoes in portions of Sonoma county. Harvesting and thrashing continue; the yield of wheat is much below average, and in some places the quality is inferior. Extensive fires in the vicinity of Santa Rosa have injured pasturage.

SAN JOAQUIN VALLEY.

Warm, clear weather, favorable for harvesting and the maturing of the fruit crop, prevailed during the week. Drying north winds occurred on several days, but did no damage to the crops. Grain harvesting is about over, and in most sections is considerably below the average. Nearly all of the grain harvested has been shipped to the warehouses and is being held for higher prices. The warehouses in some sections are being taxed to their utmost capacity. Reports from all sections are favorable for a large fruit crop. Farmers are busy gathering their fruit, and the canneries and dried fruit packing houses are running to their full capacity. Peaches are the principal fruit being put up at present. In some sections labor is scarce. Some fruit is being shipped to southern California, and the market in the northern part of the State is being kept fully supplied. Pears, plums and prunes are doing well. Watermelons and table grapes are being marketed. Citrus fruit is in good condition. The second crop of figs promises to be very good. The second crop of alfalfa is nearly all saved, and is of good quality. Stock are in fine condition and feed is abundant.

SOUTHERN CALIFORNIA.

Extreme heat during portion of the week has been injurious to walnuts and deciduous fruits, and has done some damage to early grapes. Walnuts are dropping badly in some places, while in others the nuts and trees are in excellent condition; there will be a fair crop. Citrus fruits are reported in splendid condition in most places, and a heavy yield is predicted. Corn and tomatoes were somewhat damaged by the heat. Water is becoming scarce.

EUREKA SUMMARY.—Much damage is being done to vegetables by grub worms; spraying with Paris green and water. High wind caused some early apples to drop.

LOS ANGELES SUMMARY.—Hot weather affected summer crops on unirrigated land; there were occasional showers, but too light for good or harm. Almonds are ripe. Oranges are growing fast and a good crop is expected.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Aug. 8, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Average Seasonal Rainfall to Date.....	Minimum Temperature for the Week.....	Maximum Temperature for the Week.....
Eureka.....	.00	T	.12	48	64
Red Bluff.....	.04	.04	.04	60	104
Sacramento.....	.00	T	.02	50	102
San Francisco.....	.00	T	.04	50	82
Fresno.....	.00	T	.00	56	108
Independence.....	.01	.07	.07	54	96
San Luis Obispo.....	.00	T	.03	50	104
Los Angeles.....	.00	.01	.05	56	92
San Diego.....	.00	T	.03	62	80
Yuma.....	.00	.02	.06	70	106



## HORTICULTURE.

### The Citrus Regions of California.

By B. M. LELONG, Secretary California State Board of Horticulture.

While orange trees were among the earliest introduced into our State, having been brought here by the Missiou Fathers, it may be said that orange culture is of very modern origin, and the industry has assumed commercial importance only since 1880.

The so-called citrus region is one of indefinite boundaries, and the question where oranges would or would not grow has given rise to much acrimonious discussion between various sections of the State. It may be set down as a fact that the orange will flourish in spots over the greater part of the State, the exceptions being in the extreme northern counties and the higher altitudes of the Sierra Nevada and the Coast Range. The cultivation of citrus fruits has formed the chief horticultural industry of the extreme southern counties, and from this fact an impression has gone abroad that they would not flourish elsewhere. They are found in places along the entire length of the San Joaquin and Sacramento valleys, and very excellent fruit is grown as far north as Shasta. Of course this vast area is not all adapted to the culture of citrus fruits, in fact but a small portion of it is so adapted, but enough has been done to prove that the climatic conditions required by the orange and lemon are to be found over a large portion of California. While, too, the citrus industry is the principal one of the southern counties, not all of the land in that section is suitable for the growth of citrus fruits.

Outside of the southern counties citrus fruits of exceedingly good quality are grown in the foothills of Kern county. In Tulare county there is a strip of land along the base of the foothills of the Sierra Nevada mountains where oranges have been planted on a large scale, and they are grown very successfully both at the north and south ends of the belt. Citrus fruits grown at Porterville are rapidly assuming a front position and share the honors in this line with other similarly favored sections of the south. All along the foothills where water can be obtained oranges thrive. There are no damaging frosts or destructive winds. There are a number of fine orchards, and large areas of new land are being planted every year to citrus fruits.

Placer county has numerous citrus orchards, and the area in citrus culture is gradually extending, especially about Newcastle, Loomis, Rocklin and Penryn.

In Sacramento county considerable attention is now devoted to the culture of citrus fruits at Orangevale and Fair Oaks. In the former colony large plantings are to be seen and large shipments of this fruit are being made annually therefrom.

Citrus fruits do well over a large portion of Butte county, which county is entitled to the position of leader in the northern citrus belt. Prior to 1886, citrus culture was largely experimental, although even at that time the fact that oranges would grow there and could be made a profitable crop had gradually forced itself upon the attention of fruit growers. The winning of the award at the Northern Citrus Fair in Sacramento that year confirmed the belief of the citrus growers there, and a great impetus was given to the new industry, until now Butte county is better known for her production of citrus fruits than for those which had so far proved of greater commercial importance. The colonies of Thermalito and Palermo have taken their chief impetus from the fact that oranges will grow there, and the planting of orange trees has not diminished, but rather increased with time. Wyandotte, adjacent to Palermo, is another favorite section where citrus fruits are grown successfully. The oldest orange tree in Northern California is at Bidwell's Bar (Butte county), where it may still be seen. This tree was grown from seed of an Acapulco orange planted by Jesse Morrill at Sacramento in 1855 and transplanted to its present site in 1859.

In Yuba county large tracts have been set out in orange trees, notably at Wheatland and Smartsville.

In Stanislaus county the area of citrus growing is being rapidly extended. The orange has been successfully grown about Knight's Ferry for a number of years, but only recently has the culture of this fruit been pursued on a large scale. Extensive plantings are being made about Oakdale.

The western portion of Amador county is admirably adapted to fruit growing. The same citrus belt traverses this county that encircles the northern counties of Butte, Nevada and Placer, and oranges and lemons of remarkable size and flavor have been produced there.

In Calaveras county citrus fruits have not been grown very extensively, but at Campo Seco there are orange trees over thirty years old, which bear good crops annually, as also in the citrus belt which embraces the northern part of the county.

In Fresno county until recently very little attention was paid to growing citrus fruits. A few orange orchards in the foothill regions of the county showed the future possibilities of the section, and the acreage is now being rapidly extended. The oranges and

lemons exhibited at the Fresno citrus fairs in the past two years compared favorably with those grown in other favored sections adjoining.

In Merced county the orange thrives best in the thermal belt of the Sierra Nevada foothills. There are numerous plantings in and about Merced City.

Fine fruit has also been exhibited at the Cloverdale citrus fairs held there for the past four seasons, showing the possibilities of that section in citrus culture.

It will be seen from these statements that the citrus belt of California is not confined within any mere geographical boundaries, and no compass and chain can separate the so-called southern from the northern citrus belt, but that with proper conditions citrus fruits can be grown over a large area of the State, and without proper climatic conditions they can not be grown successfully.

**PRIMITIVE ORCHARDS.**—The most extensive orange orchard of early planting was at the San Gabriel Mission, in Los Angeles county, supposed to have been set out in 1804 by one "Father" Thomas Sanchez. The first orange orchard of any note, outside of the missions, although small and intended for home use, was planted by Louis Vignes at Los Angeles in 1834. That same year Manuel Requena also planted a small orchard. Other plantings soon followed, the most notable and important of which was that of the late William Wolfskill, at Los Angeles, consisting of two acres set out in 1841, and this was probably the first orange orchard planted in the State with a view to profit. In 1853 the Matthew Keller orchard, opposite the Wolfskill orchard, was planted. Another orchard was planted north of the San Gabriel Mission, now known as the Wilson orchard. These plantings did not immediately succeed each other, but a considerable period elapsed from the date of the setting out of the mission orchard, and even after the success of this latter orchard had been assured other plantings were slow and not extensive.

In 1857 a few trees were planted at old San Bernardino by L. Van Leuven from seed grown by him. He also planted the same year forty-five trees obtained from Los Angeles. About 200 were planted at Crafton by Myron H. Crafts, about 1865. The first seeds were planted at Riverside in 1870, and the first trees in orchard, grown from these seeds, in 1872 and 1873. In 1869 Frank A. Kimball planted some orange and lemon trees at National City, San Diego county. At that time there were two old orange trees growing in El Cajon valley.

But little progress was made in orange culture from 1857 until 1862, at which date there were but 25,000 trees in the entire State, and two-thirds of these were in the Wolfskill orchard. From this date the planting of orange trees increased, but not with any great rapidity until 1873, when the first impetus was given to the industry. Southern California was out of the reach of railroad transportation. Fruit for the market was hauled to Los Angeles in wagons and from there transferred to rail and steamer. This process was slow and expensive, and but a limited area, and that not the best land for the purpose, could be cultivated. The completion of the Southern Pacific line, however, gave superior transportation facilities, and at the same time opened a new and better region. Riverside had already started, having been settled in 1869, and a considerable area of orchard land was set to oranges. Shipments of fruit to San Francisco and the East commenced, and they brought good returns and encouraged the growers. It was not, however, until the opening of the Atchison, Topeka & Santa Fe lines that the highest development took place. From this time on there was a veritable boom in orange planting. Some of the returns from these orchards were almost incredible, as much as \$3000 from one acre having been reported, and \$800 to \$1000 being no uncommon yield. Of course, an industry that would pay such profits was eagerly sought. Lands suitable for orchards advanced rapidly in value; other lands advanced laterally, and it became profitable to subdivide them to this purpose. Land companies, irrigation companies and planting companies were organized with sufficient capital to carry out their schemes, and the whole extent of a country which had been a forbidding waste was soon converted into a fruitful orchard. The very face of nature was changed, and in a few years southern California became one of the most important sections of the State.

In 1862 H. M. White planted two orange trees in Frazier valley, east of Porterville, Tulare county, which are still bearing and which formed the nucleus of a forty-acre orchard that now surrounds the original tree at Plano, in the same county; Mrs. Gibbons, in 1863, planted some orange seed as an experiment, which proved successful. Other plantings followed, until the present citrus district of Porterville developed. The first orchard was planted in Porterville in 1883 by A. R. Henry. About the same date a small planting was made at Centerville, Fresno county. A few trees were planted by the agent of the Marysville & Oroville Railroad as early as 1868 in his garden at Oroville, Butte county.

A small orange grove was planted by Nicholas Carriger in 1871 about 2½ miles west of the town of Sonoma. L. L. Lewis, the present owner, says: "These trees are now over 3 feet in circumference,

and some of them will yield this season as high as twenty-five boxes of oranges."

Thus we find that, as early as 1870, small orange groves had been planted all along the foothills from San Diego to Butte county. Plantings in many of the valley counties had also been made up to this date. These latter have served to prove the adaptability of the valleys to the growth of the industry, while along the foothills the small beginnings have developed into one of the most permanent and profitable branches of horticulture in the State.

**EXPANSION OF ORANGE CULTURE.**—While oranges had been grown in the most favored sections of southern California, and to a very small extent in other portions of the State, to Riverside is due the great impetus that brought the industry into national prominence. The twenty varieties of oranges that competed against the world at the New Orleans World's Fair, and to which was awarded the gold medal for their superiority, were grown at Riverside and the fact was heralded the world over. It is also largely to Riverside that the orange industry is indebted for its present importance, from the success attained in the cultivation of the Washington Navel, an orange which achieved widespread fame for itself and for the location where it was first successfully grown.

The latest tree census from returns made by county assessors shows the number of orange and lemon trees in the State to be as follows:

	Oranges.	Lemons.
Bearing trees.....	1,464,332	230,453
Non-bearing trees....	1,969,940	963,572
Totals.....	3,434,272	1,194,025

It would be safe to add to the above figures 20%, which would be nearer correct. We then have 1,757,198 orange trees bearing and 2,363,928 not bearing, and 276,543 lemon trees bearing and 1,156,286 not yet bearing, or a total of 5,553,955 orange and lemon trees in the State. Averaged at 100 to the acre, we have 55,539.55 acres in citrus trees in the State.

**ESPECIALLY FAVORABLE AND DANGEROUS LOCALITIES.**—All along the belt of country from Tehama county to San Diego there are especially protected or favored localities where the orange and the lemon grow to perfection, and also localities where it would be unsafe to attempt citrus fruit culture as a commercial enterprise. This is caused by the local topography of the country and does not depend much on the altitude. Wherever cold currents of air from high altitudes flow to the valley without interruption it will not be safe to attempt citrus cultivation within the sweep of these currents. On the other hand, wherever these descending currents are cut off or turned aside by spurs of the mountains, leaving the warm atmosphere of the days undisturbed during the nights, there orange and lemon culture may be engaged in without danger from frost. In other words, the eddies of air currents must be selected and the main flow of these currents must be avoided.

Every one who has traveled along these Sierra foothills parallel with the valleys, particularly in the winter season and at night, will recall his surprise at the sudden changes of the temperature of the atmosphere within short distances. He may also remember to have noticed tender plants and shrubs seared and frostbitten, while just over a ridge or cone the same plants and shrubs were in full leaf and growing luxuriantly. Want of attention to these facts has caused many a disastrous failure in the cultivation of citrus fruits in California.

It may be here observed that these peculiar natural phenomena are more striking and their lessons are more imperative north than south of the Tehachapi pass—for the reason that south of that point the coast range of mountains is broken up into fragments, and the tempering influences of the waters and breezes of the ocean are more direct and powerful than farther north, where this range is practically unbroken and the citrus belt is farther inland. These disadvantages of the northern section are, however, somewhat counteracted in the fact that the drier and warmer summer atmosphere is a greater guarantee against the spread and ravages of insect pests. The more elevated inland localities in the south have this same advantage over localities nearer the coast.

There are orange and lemon trees growing in nearly all of the counties of the State not exclusively in the mountainous sections, and many of these trees are bearing more or less fruit of very fair quality. For climatic reasons, however, the citrus fruit industry is and must be confined to a belt of country lying along the foothills of the Sierra Nevada mountains. This belt is called the "Thermal Belt." It stretches from San Diego to Tehama county, a distance of over 700 miles, and varies in width from 2 or 4 miles to 25 or 30. In this belt it is estimated there are about 1,500,000 acres of land adapted to the safe cultivation of citrus fruits on a commercial basis.

The altitude ranges from 30 to 1800 feet above sea level. The mean summer temperature of this belt is somewhat higher in the northern portion than in the southern, but the mean winter temperature is higher in the southern than in the northern portion. The mean temperature for the year does not vary more than 4° throughout the whole belt.



## Horticultural Awards at Paris Exposition.

TO THE EDITOR:—Having recently returned from Paris I take pleasure in enclosing herewith a list of the awards to United States exhibitors in the temporary competitions in horticulture at the Paris Exposition during the month of June. The United States exhibits of fresh fruits of the crop of 1899 are generally conceded to be the best thus far displayed at the Exposition, and have received the approval of the juries and the general public.

Preparations are now being made to forward choice specimens of the crop of the present year for exhibition during August, September and October. The indications are apparently favorable for a largely increased demand for American fruits in Europe.

WM. A. TAYLOR, Acting Pomologist.

U. S. Dept. Agr., Washington, July 28.

The following are awards to United States exhibitors in temporary competitions in Group VIII, Horticulture, at Paris Exposition:

Temporary competition, June 13, 1900.

CLASS 45.—Fruits and fruit trees.

First prizes—collections of apples, crop of 1899.

Division of Pomology, U. S. Department of Agriculture, general collection, fifty-three varieties from twelve States.

Illinois State Horticultural Society.

Missouri State Horticultural Society.

Nebraska State Horticultural Society.

New York State Commission.

Collection of citrus fruits (oranges, lemons and pomeles), California State Commission.

Collection of oranges and lemons in commercial packages, California State Commission.

Second prizes—collections of apples, crop of 1899.

North Carolina Department of Agriculture.

Virginia State Horticultural Society.

E. F. Babcock, Waitsburg, Wash.

Elbert Manchester, Bristol, Conn.

Marshall Brothers, Arlington, Neb.

I. B. Perrine, Blue Lakes, Idaho.

E. F. Stephens, Crete, Neb.

Third prizes—collections of apples, crop of 1899.

New Mexico College of Agriculture.

P. Pedersen, Huntington Valley, Pa.

CLASS 46.—Ornamental trees, bushes, plants and flowers.

First prize—collection of sweet peas. W. Atlee Burpee & Co., Philadelphia, Pa., fifty varieties in pots.

Temporary competition, June 27, 1900.

CLASS 45.—Fruits and fruit trees.

First prizes—collections of apples, crop of 1899.

Division of Pomology, U. S. Department of Agriculture, general collection, forty varieties from twelve States.

Illinois State Horticultural Society.

Missouri State Horticultural Society.

Nebraska State Horticultural Society.

New York State Commission.

Virginia State Horticultural Society.

P. Gleason, Leroy, N. Y.

Collection of oranges and lemons in commercial packages, California State Commission.

Second prizes—collections of apples, crop of 1899.

Indiana Horticultural Society.

New Mexico College of Agriculture.

North Carolina Department of Agriculture.

E. C. Warner, Cheshire, Conn.

Third prizes—collections of apples, crop of 1899.

E. F. Babcock, Waitsburg, Wash.

I. B. Perrine, Blue Lakes, Idaho.

A. I. Weidner, Arendtsville, Pa.

## State Board of Horticulture.

A meeting of the executive committee of the State Board of Horticulture was held at the Capitol, July 31, and reported by the Record-Union.

On account of the importance of the question embodied in the disposal of the fruit products of the State, and the need of having representatives of all fruit associations, exchanges, etc., it was decided to hold the next State Fruit Growers' Convention at San Francisco—that being the only place where these representations can be secured—from the 4th to the 7th of December next.

A committee on arrangements was appointed, consisting of Alex. Craw, E. J. Wickson and B. Rowley.

All associations throughout the State will be immediately notified to send representatives to this convention to report the season's operations. President H. G. Bond of the State Cured Fruit Association was especially requested to present the report of the organization and operation of said association, as was also the Raisin Growers' Association and the orange growers' fruit exchanges.

A communication was ordered transmitted to the commissioner of customs at Washington, D. C., requesting that the officers of all vessels from foreign countries be instructed not to allow any plants or fruits to be landed until examined for pests and diseases by the horticultural quarantine officer stationed at San Francisco for said purposes, and especially vessels touching at ports that have been annexed to the United States, and from which customs officers have been withdrawn.

A communication was ordered to be transmitted to the Postmaster General asking that all plants coming from foreign countries through the mails be detained until examined by the horticultural quarantine officer and his assistants before delivering.

The report of Alexander Craw, State Horticultural Quarantine Officer, was read, as published in the next column.

## ENTOMOLOGICAL.

## Prevention of Pests and Introduction of Blessings.

By ALEXANDER CRAW—Semi-annual report to State Board of Horticulture, August, 1900.

QUARANTINE AT SAN FRANCISCO.—Of the steamers and sailing vessels that arrived in the port of San Francisco from foreign countries, 103 had trees, plants or fruit on board. This consisted of 176 cases of trees and plants, 93 boxes, baskets and bundles of trees and plants, and 105 loose lots; 9243 boxes of citrus fruits, principally limes from Mexico and Unshiu oranges from Japan; 820 crates of pineapples, 5865 boxes of miscellaneous fruits. No more oranges from the "orange maggot" districts of Mexico have been received as freight; all such fruit in the possession of passengers and crew have been confiscated and destroyed. On December 30th, the steamship Acapulco arrived. A passenger had two boxes of fruit. In the center of one box were two dozen oranges covered with bananas. We found several oranges infested with the Mexican orange maggot (*Trypeta ludens*), so all were destroyed. As a result of the destruction of the shipment of oranges from Acapulco, referred to in my last report, the Mexican Government has issued a circular to the State Governors urging them to use all possible means to extirpate the pest from their respective States.

Your special agent, George Compere, writing his observations from Fiji, says:

The Fiji Government are now negotiating with the agent of the Oceanic Steamship Company to have the steamers of that line call at Fiji ports to and from California; should they do so, there will be great danger to the fruit interests of California. Mango fruit is very badly infested with the maggots of fruit flies. We bred two species of flies from various fruits and were informed that 80% of their oranges become infested with maggots. The new crop is just setting up, so we are unable to say what fly infests their oranges.

Mr. Compere, writing from Queensland regarding the ravages of "Queensland fruit fly" (*Tephritis tryoni*), says:

The growing of deciduous fruit in Queensland is a thing of the past. It made me sick at heart to see the destructive work of this pest; not a peach, plum, prune or apricot is allowed to escape its attack.

On Sunday, April 22d, the steamer Umatilla arrived from Victoria, B. C. In her freight was a crate containing seven Pomelo orange trees from China, for an orange grower of Azusa, Los Angeles county. As the trees were infested with that injurious, small, black, armored citrus scale, *Parlatoria zizyphus*, they were stopped and destroyed. This scale is not found in the orchards or gardens of the State. It was introduced into Honolulu, and some orange trees there are completely covered with it. It belongs to the same genus as the "Chaff scale" of Florida. A few "purple scale" (*Mytilaspis citricola*) were also found on the trees.

LAND CRABS.—On December 30th, the Bessie K. arrived from Clipperton island. A passenger had a box of live "land crabs." When alive, they are an orange red color—the same color as an ordinary crab when cooked. The owner stated that he intended presenting them to the universities of Berkeley and Stanford. As this species is known to confine itself to land and prefers a vegetable diet, I considered that they would be safer dead, and just as valuable for specimens, so killed them with chloroform.

DECIDUOUS TREES, ETC.—The scarcity of deciduous fruit nursery trees the past winter in California resulted in unusually heavy importations from Oregon and east of the Rocky mountains. The county horticultural commissioners and inspectors have been notified of the arrival of such stock in their districts by the railroad agents. The introduction of such trees without inspection and disinfection is a positive danger to the State, yet there are one or two counties where the Supervisors have been petitioned by the orchardists to appoint Commissioners, and have failed to comply with the law. The introduction of one serious pest into their orchards would require annual expense to combat it much greater than it would to guard against its entry.

AFRICAN PARASITE OF THE BLACK SCALE.—Through the efforts of Ed M. Ehrhorn of Mountain View, the Hon. S. F. Leib of San Jose, United States Senator George C. Perkins called upon Secretary Wilson and requested that he use his influence with the Secretary of Agriculture of the Government of Cape Colony to try to send to California living specimens of *Aphycus lounsburyi*, and *Scutellista cyanea*, both internal parasites of the "black scale," *Lecanium oleae*. On June 13th Mr. Ehrhorn received, through the Department of Agriculture, two boxes of twigs slightly infested with black scale. He notified me of their arrival and requested me to visit and consult with him regarding their treatment. Some of the parasites, *Scutellista cyanea*, has issued from the scale, and were very lively, and more since have developed. Mr. Ehrhorn has placed colonies in several orchards infested with black scale and under favorable conditions for their propagation. Besides he has some in confinement. Prof. Charles P. Lounsbury

of Cape Colony claims that the above parasites keep the "black scale" in check in that country.

ANOTHER BLACK SCALE ENEMY.—Mr. Compere has discovered a most important internal parasite of the black scale at Brisbane, N. S. W. He writes:

"This is the parasite that we have been looking for. Arriving at Brisbane, I noticed that the oleander trees were free from the black scale. I at once made a search to ascertain if possible what was responsible for the absence of that pest, for certainly the climatic conditions are very favorable for that scale. On making an examination of all the trees met with, I soon discovered that it was the work of an internal parasite. The majority of the scales had two and three holes in their backs and some with four or five holes."

The few scales on the trees were not sufficiently developed to be parasitized, so he visited other sections and returned later. Since then I have received from him two shipments of infested twigs from which the small parasites have recently been issuing. Through the kindness of the California Nursery Company of Niles, in furnishing me with oleander plants in pots, I have been enabled to keep the Brisbane parasites indoors to guard against the possible introduction of any secondary parasites that may exist on the imported parasites.

I stocked the oleander plants with young black scale, also eggs, and they are now very thoroughly infested. Each plant is placed in a large glass jar, covered with silk. The oleander branches sent by Mr. Compere I have inserted in glass tubes containing some water, and to prevent the little parasites from accidentally falling into the water, I have stopped the mouth of each tube with sphagnum moss, and placed them into large glass breeding jars; those are also covered with silk, and as the parasites develop, they are transferred to other jars.

In this way the material will keep fresh until the parasites all mature. If the internal parasites that breed in the half grown black scale collected by Mr. Compere at Honolulu, and liberated in this State, establish themselves, together with the other species and *Rhizobius ventralis*, we will be in a position, I hope, to keep this pest under control.

ENEMIES OF THE COTTONY CUSHION SCALE.—The *Vedalia cardinalis* with the aid of *Novius Koebele*, and *Lestophonus iceryae*, has practically exterminated the cottony cushion scale from the orange and lemon groves of the State. But there are a number of trees and plants that, when infested with the scale, remain as breeding places for the pest, as the insects mentioned will not breed on the scales. This is probably caused by the flavor imparted to the scales by such trees as laburnum, broom, maples, some pittisporums and other plants.

The recent discoveries made by Mr. Compere may in a measure offset this. One is a black vedalia, a few of which reached us alive. These were placed in a breeding jar, and now I have a good supply. Colonies will be distributed after the next hatching. Another species has an irregular diamond shaped mark on each elytron. This species as yet has not increased as freely as the black one.

The most wonderful parasite yet found for this scale, in my opinion, is an internal chalcid fly (*Ophelosia Crawfordi*). When Mr. Compere sent these few scales, he wrote: "I am sending you a few cottony cushion scales that contain maggots. Breed them and see what they are."

They were placed in a breeding jar on May 7th, and May 18th they began to issue. On that date I placed some fresh twigs infested with icerya in a breeding jar, the bottom of which was covered with damp sphagnum moss, and in this jar I placed the few parasites. Forty-six days afterwards the jar was alive with the active little parasites. I have prepared other colonies and the next hatching I will liberate colonies in different counties so as to establish them in the State.

THE GRASSHOPPER PARASITE.—I am pleased to report the successful importation of the dipterous parasite of grasshopper or locusts. Mr. Compere, your special agent, made a side trip of 500 miles in New South Wales to secure these parasites. He could only find a few grasshoppers and those he sent. On his return, and before he reached Sydney, the hoppers were dead, even with food in the box. He had the package placed in the steamer refrigerator and forwarded to San Francisco with other beneficial insects.

The shipment reached the office on May 7th. I placed the dead hoppers in a breeding jar. A few flies of the genus *gaurax* issued a few days after. On June 11th, a few of the true parasites made their appearance in the jar. I telegraphed to Horticultural Commissioner William Berry of Niles as to the prospects of finding grasshoppers in the Livermore valley, and he wired me to be sure and take them there.

A. D. Pryal, a Horticultural Commissioner of Alameda county, accompanied me by rail to Livermore. We drove out to the uncultivated districts where locusts prefer to deposit their eggs. There we were fortunate to find the locusts had hatched and some nearly full grown. Here the parasites were liberated. I made a small opening in the silk cover of the jar, and as they issued, I counted them, and found that fifty-nine perfect flies were in the colony. The vineyards of Livermore and other sections of the



State are frequently raided and stripped of their leaves and berries by grasshoppers. I consider the Livermore valley one of the best localities in the State for the establishment of such insects, as there is a good range where they can spread over into the San Joaquin and Sacramento valleys.

This parasite belongs to a group of parasitic flies, all the members of which prey upon other living insects. Each species confines its attack to its own particular pest. Thus, this species will deposit its eggs on grasshoppers; there are other species that prey upon certain classes of beetles, and others on butterfly and moth caterpillars and chrysalis.

It is a well-known fact that without such friendly aids, certain insects would cause great destruction of crops. I will make several visits to Livermore and capture some grasshoppers to ascertain if the parasites have established themselves.

J. P. Buggy of Corowa, New South Wales, is the gentleman that has the credit of first calling attention to this parasite. A. M. Lea, entomologist of Tasmania, when in New South Wales, made a very thorough and careful investigation into the work of these parasites, and stated to Mr. Compere that he found 90% of the female locusts were parasitized and 15% of the males. As you are aware, you have been endeavoring for the past nine years to secure living specimens of this parasite.

Colonies of the *Vedalia cardinalis*, from our breeding jars in the office, have been sent out this spring. In May, 1899, four colonies were sent to the Commissioners of Tulare county to check an outbreak of cottony cushion scale at Lindsay. This spring County Commissioner J. T. Bearss kindly sent us several strong colonies early in the season that materially strengthened our winter colonies for propagation.

**PARASITES.**—The work of the internal chalcid fly, *Comys fusca*, on the brown apricot scale (*Lecanium armeniacum*), in the prune and deciduous orchards, has been so effective in Santa Clara county the past season that I was unable to collect them in that county. Commissioner Barry of Niles had successfully established the *Comys* in a number of orchards in his district, and during June I collected and distributed to other counties, that have the "brown apricot scale," thousands of those useful parasitic flies. I find that colonies are now established in Napa, Sonoma, Tulare and San Benito counties from insects we sent last year. Dr. L. O. Howard, when here two years ago, took infested twigs to Washington, and wrote me that every scale was parasitized. You can see that it is a most important parasite of this serious pest.

**CABBAGE BUTTERFLY.**—The European cabbage butterfly that was introduced into the Eastern States many years ago, and was a troublesome pest in Los Angeles county a few years ago, is not so plentiful now, owing to the attacks of two parasites; one is a *Tachina* fly, and the other is a small hymenopterous parasite; both work in the butterfly chrysalis. This pest is found in all of the bay counties, so I wrote to Commissioner E. H. Rust of Los Angeles, requesting him to send me a supply of the chrysalis, so as to secure the *Tachina* parasite. Mr. Rust detailed one of his inspectors, Fred Maskeu of Long Beach, to collect and forward the insects, which he kindly did. I was very much surprised to breed from the material he sent hundreds of small hymenopterous parasites that were new to me. I sent specimens to Dr. L. O. Howard, and he kindly identified them as *Pteromalus puparum*, an enemy of the cabbage pest. The parasites have been liberated. We do not look for extermination, but they will reduce the numbers of the pests, so that cabbages are not as completely riddled by caterpillars as formerly.

**ORCUS AUSTRALASIE.**—Mr. Compere forwarded a good supply of *Orcus Australasie* from Tasmania. The markings on this lot were of a duller orange red than those from Australia. Colonies of these were sent to San Diego, Santa Clara and San Mateo counties. Possibly this one coming from a cooler county may breed more rapidly.

**PACKING LADYBUGS.**—Mr. Compere has adopted a system of packing mature ladybugs that reduces the loss to not more than 3%. He crushed some dried dates to the inside of the box cover, and covered that with a piece of mosquito netting. The sugary moisture from the dates appears to sustain the insects in their long voyage across the ocean. Of course they are placed in the refrigerator to keep them in a hibernating condition.

**NEW COCCIDS.**—Since my last report the following new coccids have been found on trees and plants entering the State. They were first determined for me by Prof. Theo. D. A. Cockerell:

*Pseudolecanium tokionis*. Ckll: *Asterolecanium variolosum*. Ckll: *Aspidiotus cryptoxanthus*. Ckll: *Aspidiotus lataniae* sign. *Antonina crawi*. Ckll: *Lecanium cerasarum*. Ckll.

I look for apples and pears to be freer from codlin moth caterpillars this year, as orchardists during the spraying season were more careful in purchasing Paris green, and have taken notice of the warnings issued regarding adulterated substances that have been sold as pure Paris green. Some samples submitted I found to be worthless as an insecticide, and others contained so much free arsenious acid that it would have seriously injured the foliage of trees on which it was sprayed.

## THE VINEYARD.

### Vineyard Grafting vs. Bench Grafting of Resistant Vines.

TO THE EDITOR:—My young friends, Prof. Bioletti and Frank T. Swett, have honored me by pulling my little essay on "Resistant Vines and Vineyards in California" to pieces in your issue of the 28th ult. My letter in the *PACIFIC RURAL PRESS* of June 16th states quite clearly the differences between outdoor grafting, which I still maintain to be the cheapest and shortest way to establish our new vineyards, and bench grafting, which they claim to be the surest road to success. It is an important question, and I am glad to see from your editorial remarks that you are willing to give it due consideration in your columns, which it fully deserves. We are all seekers after truth, old or young, and though I can hardly hope to vie with two such doughty young champions, I may have some experience during fifty years of vine grafting which may prove of value. I take the practical side, as far as I have been able to see, to reach the best results at the shortest possible time; to make grape culture easy to the vineyardist, and considering the successes and failures I had to record during a long time. They are filled with the enthusiasm of youth, and, pardon me if I say it, with some of its illusions. But we both agree, I think, in one point: careful selection and preparation of soil of our new vineyards and casting aside the views entertained in the past, "that any soil was good enough for vineyards and any preparation of it would grow grapes."

**How To Do It.**—For the sake of argument, let us confine ourselves to the *Rupestris* St. George, which seems to be the favorite now, after five or six years' trial, as every cutting almost grows, although I think the trial has been hardly long enough to test it fully. My way would be to plant the cuttings directly in the vineyard, not in the old slovenly way with a crowbar, but by throwing out a spadeful of ground, putting down the cutting, say, 10 inches deep, with all the lower buds cut out below the surface (a practice I followed fifteen years ago) and firming the lower end of the cutting with the foot, then fill up to the level of the surface. This is easy planting, very inexpensive, and will cause a good stand. Then keep up good cultivation during the summer and a good, healthy growth will follow. If this is followed by careful cultivation the second summer it will bring all the vines up to grafting size the third spring. This finds us at the third spring, with the vines strong enough to take a graft of bearing wood. If this is cut long enough it may serve a twofold purpose: to take up the whole strength of the vine, distributed through five or six buds, which will bear a few pounds of grapes, and to establish the head of the vine at the proper distance from the ground. With the fourth season the vineyard thus established will be able to bear a good crop. Of course, the grafts should be staked and tied the third summer.

**ADVANTAGES.**—The advantages of this method, which I claim, are as follows: 1. Cheapness. A vineyard can be planted with cuttings at a nominal cost, and as the cutting makes its roots at the lower end or base, it will make a healthier and stronger vine. 2. It makes cultivation easier during the first two summers. 3. It saves an immense amount of work in transferring grafts to callus bed, then to nursery, and finally to the vineyard where it is a much more difficult task and requires more and better labor to plant a rooted vine than a cutting, while its roots take a year at least to find the way to the subsoil which the cutting has found the first year. Consequently, a vineyard thus established is worth more than on the oft-transplanted roots, even if ever so carefully handled.

**THE CONTRAST.**—For a comparison, let us look at bench grafting. First, the cutting and graft must be thoroughly matched to be of the same thickness. A careful man can not put up over 200 a day. Then they are put in a "callus bed," which may be at the disposal of the State University but hardly accessible to the private grape grower. Here they are kept for some time, then transplanted to nursery where they must be irrigated several times. The next spring they are taken up and transplanted to the vineyard. Does the reader comprehend what all this means? It means at least 50% added to the cost of establishing a vineyard, and a year later in return. Can they afford it? Mr. Paul Masson of San Jose informs me that he was one of the first importers of *Rupestris* St. George; he is entirely satisfied with it as a stock and can establish 90% of grafts growing in vineyard grafting.

I like the combination plan of my friend Swett: to plant with grafted vines and replant with bench grafts the next spring. No doubt they will be needed. But I do not wish to tire the patience of your readers entirely. Suffice it for to-day that we are all trying to find the right path, that my young friends think they have found it, and that I caution them "go slow."

If the Lenoir and the whole Bourgainiana family were not so difficult to root from cuttings, they are yet a fine and well proven stock. On a recent trip

trip through Napa county I saw vineyards of Lenoir, eighteen years old, as vigorous as ever, while the surrounding vineyard on *Vinifera* roots had been killed long ago and are now replanted with young Lenoir vines for stocks. Eighteen years of resistance in full vigor ought to convince the most skeptical. All through the valley all the young vineyards on Lenoir looked the very picture of health; its foliage is something marvelous and it will be some time until it is excelled as a resistant stock, while its grapes, where a graft may fail, make a fair crop of fine Burgundy grapes. I am proud of having introduced it to California.

G. HUSMANN.

Napa.

### Mr. Pfeffer's Views on Resistant Grafts.

TO THE EDITOR:—To "the most pressing question, whether it is better to graft the resistant cuttings with the desired *vinifera* variety and root them in the nursery so as to plant out at once in the vineyard a rooted, grafted vine, or whether it is better to get the resistant cuttings well established as young vines in the vineyard and graft them in place," I would say:

Undoubtedly the planting of vineyards with ready-made plants is the best, but where can the planters get the plants? "Make them yourself," some will say.

Well, now, this is exactly what I have tried to do during this last six years, but so far I have not always been so successful that I could recommend the method to my fellow growers. I have learned to shape a scion, not as straight as a machine does it; I have brought unlimited patience to the task; I am in position which enables me to use for this purpose much better suited material than others have. I have had in one instance not only a very high percentage of successful grafts, but actually also a pretty good sprinkling of fruit growing on the scions during the first season of growth, but still every year I am making big blunders. However, I do not condemn the proposition. It is an admirable way, the grafting of cuttings on cuttings when everything connected with it is thoroughly understood and provided for. But it takes a long time, gentlemen, till everything works well.

In this discussion it is well for us to consider the fact that the custom prevailing in the past has been to simply plant the cuttings (which could often be had for the asking), and the vineyard was established; it was a cheap way, and many planters overindulged to their sorrow, but to advise them now to expend 3, 4 or 5 cents right at the start would be extremely discouraging to many. The installment plan to pay, I believe, is more attractive to the impoverished grape growers than to plant anew. Furthermore, I believe the growing of *phylloxera* resistant vines grafted with our favorite *vinifera* is a business principally that of the nurserymen; but so long as they do not know positively upon what stocks to graft, they must not be blamed for not going extensively into the business.

WM. PFEFFER.

Westside, Cal., Aug. 3.

## THE DAIRY.

### An Australian Butter Package.

Consul G. H. Murphy at Magdeburg writes to the State Department that attention has been attracted in Germany to a new method of packing butter which has been tried with very satisfactory results in connection with shipments from Melbourne to Kimberley. This method which, it is said, has already been extensively adopted in Australia, consists in placing the butter in a box formed of six plates of ordinary window glass whose edges are closed with gummed paper; the glass box is covered with a layer of plaster of paris, about one-fifth of an inch thick, and is then wrapped in specially prepared waterproof packing paper. As gypsum is a bad conductor of heat, a regular temperature is maintained within the glass box. At present the cases are made of sufficient size to contain 100 kilograms (220 pounds) of butter. Mr. Murphy thinks this idea may prove of special value to firms in the United States engaged in shipping butter and other articles to tropical countries, especially if the question as to the proper size and construction of the boxes be given additional consideration. It seems likely, moreover, that this system of protecting delicate articles may be found useful even in the home market.

The Stockton Independent says the big rush of the season is now on at the Stockton cannery, and, although there are 450 women and 250 men employed, it is impossible to handle all the fruit that is offered, and large quantities of that which is being delivered are being forwarded to the canneries of the association in San Francisco and San Leandro. In three days last week 13,000 boxes had been forwarded that could not be handled. There is a complaint of scarcity of labor, notwithstanding the wages earned by women vary from \$1.25 to \$2.50 per day.



## Agricultural Review.

### ALAMEDA.

**FRUIT MARKET.**—Alameda Argus: Over 100,000 pounds of fruit are consumed daily by residents of Oakland, Alameda and Berkeley. This is largely distributed by Oakland dealers. The fruit season is now at its height and large shipments are received daily. The quantity of fruit handled has doubled during the past five years. The fruit situation is in some respects peculiar. This is a fruit growing section, and yet but little of the fruit product of this county is sold through Oakland dealers. The fruit which the local houses handle comes principally from Sacramento valley. Melons come from Lodi and Fresno. The chief sources of supply of vegetables are local and the Sacramento river valley. The bulk of Alameda county fruit is consumed by local canners, goes to San Francisco or is shipped East. Owing to a combination among the produce dealers only one company is running boats up the Sacramento river and brings fruit to all the dealers. Two gasoline schooners are engaged in the river trade, and they bring an average of 1800 to 2500 packages of fruit to Oakland every day. The market is in a satisfactory condition, the supply being liberal and the demand brisk. In Alameda county the largest crop is of apricots, though the pear crop is exceptionally large. The supply of peaches has been very fair and good prices have been secured. The cantaloupe crop will be light.

### CONTRA COSTA.

**SALE OF UNION STOCK YARDS CONFIRMED.**—Martinez Press: The sale of the property of the Union Stock Yards Co. at Rodeo to the Great Western Smelting & Refining Co. for \$23,000 has been confirmed by the court.

**SALE OF ALMOND CROPS.**—Antioch Ledger, Aug. 4: There was quite a lively time at the meeting of the Almond Growers' Association of this county last Saturday in Brentwood, there being ten bidders for the nuts. The Johnson-Locke Mercantile Co. of San Francisco was the highest bidder. The estimated crop represented by the association is 170 tons, and the successful bids on eighteen varieties are as follows: Nonpareil, 13 cents per pound; I X L, 13 cents; Ne Plus Ultra, 13 cents; L Prolific, 10 cents; Standard, 10 cents; California paper shell, 11½ cents; Pierce paper shell, 9½ cents; Hard shell, 5 cents; Walton paper shell, 11 cents; Excelsior, 9½ cents; Gilt Edge, 10½ cents; Unknown, 9½ cents; Commercial, 10 cents; Golden Gate, 10 cents; Sellers Seedling, 9½ cents; Languedoc, 9½ cents; Drake Seedling, 9½ cents; Barkley Seedling, 9½ cents.

### FRESNO.

**IMPORTANT IRRIGATION DECISION.**—Fresno, Aug. 1: Judge Webb has handed down an important decision in the case of H. Miller against J. G. James. The suit was one of the most important ever held in the county and the trial lasted over a month. It was brought by Miller to restrain James from diverting the waters of the San Joaquin river, and a temporary injunction was issued in favor of the plaintiff. Judge Webb's decision makes the injunction permanent. The result will be that thousands of acres of land irrigated by the Enterprise canal, one of the largest in the county, will go without water unless the ruling is reversed. The most significant part of the decision, however, is a ruling that Miller's right to the waters of the river is not founded on prescription or prior appropriation, but because his lands are riparian. In his complaint the cattle king set up the claim that he had used the water uninterruptedly since 1872 and was therefore entitled to the exclusive ownership of it. The court holds that the San Joaquin is a navigable waterway and that Miller is not entitled to divert the water by virtue of prescription nor entitled to restrain any one else from diverting it. The fact that his lands were riparian, while James' were not, was the only reason the court granted the injunction.

**WHEAT BADLY RUSTED.**—Reedley Exponent, Aug. 2: The rust in wheat has turned out to be far worse than was at first reported. Some of the wheat south and southeast of us yielded very poorly, although there was a sufficient growth of straw to have produced ten or twelve sacks per acre, but in many places there were not more than three or four sacks. North and east of Reedley, where the grain was put in early, a very fair yield is reported.

**RAISIN CROP SHORT.**—Fresno, Aug. 6: Reports state that the raisin crop will not be as large as expected. Estimates place it from 3000 to 3400 carloads. Last year's crop, which was short, was 3100 carloads for the State. The red spider is responsible for much of the damage, and yet in

the last few days come reports that grapes are falling from no apparent cause.

### HUMBOLDT.

**BUTTER SHIPMENTS.**—Eureka Standard, Aug. 1: Exports of butter from this county during the first half of the year show an increase of 93,875 pounds over last year. The shipments for this period during the past seven years have been as follows: 1,260,300 pounds in 1894; 1,482,140 in 1895; 1,608,325 in 1896; 1,559,150 in 1897; 1,523,555 in 1898; 1,916,700 in 1899; 2,010,575 in 1900.

### KERN.

**GORED BY A BULL.**—Bakersfield, Aug. 5: Francisco Columbino was gored to death yesterday by his bull. He went out to bring the bull from pasture. Unfortunately, he wore a red shirt. This apparently infuriated the bull, which dashed through a fence and pinioned his master to the ground.

### KINGS.

**CATTLE FROM ARIZONA.**—Hanford Journal, July 31: Eighteen carloads of cattle arrived at Guernsey from Hackberry, Ariz., in a bad condition. The cattle are owned by Crozier & Imus, stock raisers of Hackberry. This lot will be followed by six or seven more trainloads, owned by the same firm. About 6000 will be shipped by these men, having secured pasturage in the vicinity of Guernsey. A trainload consists of from 800 to 850 head.

### LOS ANGELES.

**FIGHTING THE SCALE.**—Los Angeles, Aug. 3: E. H. Rust, secretary of the Horticultural Board, reports that fumigation of orchards is being pushed ahead, and strenuous efforts are being made to have the orchards of the county cleaned up. Thousands of old trees that are infected are being torn out and burned. Twenty-five sets of fumigating tents will be used in the county.

### ORANGE.

**BEARING BANANA TREE.**—Santa Ana Blade: Frank Ey has several clumps of banana trees, one of which is now bearing several large clusters of fruit, nearly as large as that brought from the tropics. These trees are seven years old, and for the last three years have borne fruit, but the frost has always caught it before maturity. This year the fruit is much larger than ever before at the same date, and Mr. Ey is hopeful that it may come to maturity before it is nipped. These trees are said to be the largest and best specimens in the county.

### SACRAMENTO.

**VINEYARD INTERESTS.**—Galt Gazette: The grape industry promises to predominate all others in the next few years. Never before were our farmers more interested in grape growing and from plans made fully one thousand acres of grapes will be planted in this vicinity next season. Some of our large land owners are offering inducements to grape growers who will plant vineyards. The land owner's proposition is to make a present, so to speak, of one-half of the land cultivated and planted to grapes. That is, a man who will plant grapes at his own expense will receive a clear deed to one-half of the land planted. An average crop will run from four to eight tons to the acre, according to the fertility of the soil and care and attention given the vines. It is a very poor acre of ground, indeed, in the Galt district that will not produce more than four tons of grapes in a season's crop, and, even with such a showing, there is nothing that a man can turn his hand to that will prove more remunerative, with grapes at \$16 and \$18 a ton, than a small vineyard.

**PACKING HOUSE BURNED.**—Sacramento, Aug. 2: The packing house and steamer landing of J. L. Kerchival, on Grand island, opposite Walnut Grove, on the Sacramento river, were destroyed by fire this evening. The loss is estimated to be \$1200.

**FRUIT SHIPMENTS.**—Sacramento Bee, Aug. 4: Owing to the overstocking of Eastern markets through faulty distribution, with consequent unsatisfactory returns in many instances, the shipments of deciduous fruits have shown a tendency to decrease of late. The total shipments over the Central Pacific during the seven days ending at 6 A. M. to-day were 449 cars, making a total of 3387 cars for the season to date, against 3110 cars to the corresponding date last season. The shipments for the seven days, as shown by the records of the Growers' and Shippers' Association, were made up as follows, the figures denoting cars: Peaches, 126½; plums, 81; pears, 203½; grapes, 35½; mixed, 1½; apples, 1; total, 449.

### SAN BERNARDINO.

**ORANGE OUTPUT.**—Redland Citograph, July 28: In 1899 southern California shipped, up to July 20th, 10,060 cars of oranges, amounting to 3,380,160 boxes. This year, up to the same date, we have

shipped 16,829 cars, or 6,092,098 boxes—almost double, and the largest crop ever sent out of the State.

**BEET HARVEST.**—Chino Champion, Aug. 2: It is expected that beet harvest will commence in Chino on Aug. 13. It is thought that the Oxnard sugar factory will begin its campaign on the 15th, and the beets grown here will be shipped there for manufacture. Most of the crop here is in good condition and will undoubtedly give satisfactory returns.

### SAN DIEGO.

**HIGHEST PRICE RECEIVED FOR LEMONS.**—San Diego Union, Aug. 2: Last week it was announced that lemons had reached the highest price of the season; but another advance has taken place since then, and the price is not only the highest of the season, but ahead of everything that has ever been paid at this time of the year. Packers are offering 2½ cents per pound, while growers are holding for 3 cents. Usually the best summer prices are obtainable just before the Fourth of July, and a drop takes place after that date; but it has been different this year. Then, again, the highest prices of the year are obtainable in September, when lemons are scarcest, but never in the latter part of July. The importations of lemons from Mediterranean ports have fallen off. The number of boxes of foreign lemons now in this country or on the way is 203,000, against 228,000 last year. The increase in production here, however, has been sufficient to make up the deficiency in importations. Figuring by the box, the market is \$1 higher than it was at this time last year. The prices are about \$2.85 per box, while last year they ranged between \$1.85 and \$2. The warm weather has a great deal to do with the increased orders. The weather is hot not only here, but also throughout the East, and the hotter it gets the better it will be for the lemon growers.

### SAN JOAQUIN.

**HEAVY LOSS BY FIRE.**—Stockton Mail, Aug. 7: More damage than had been supposed was wrought by the fire which swept 4000 acres of land on the islands. Frank E. Lane, owner of one of the tracts burned over, reports that nearly all the stubble land had been sold to sheep men at 75 cents an acre. At this rate the damage done amounted to \$3000.

**EARLY TOKAYS.**—Lodi Sentinel, Aug. 4: Table grapes have commenced to journey eastward. The first shipment of Tokays went out Wednesday. This is not the first shipment of grapes for the season, however, as some Sweetwater went out before. Agent Anderson says the Tokays are not up to the usual standard, but he expects them to show up better as the season advances.

**WHIRLWINDS OF FIRE.**—Stockton Mail, Aug. 6: Four thousand acres on Roberts and Union islands have been swept by fire. The blaze started early last week, and is believed to have spread from a peat fire on the Igga place. It burned 800 acres of stubble, and then started afresh, and crossed into the middle division of Roberts island, leaping a levee. It also spread to Union island, and has left seven square miles of blackened ground behind it. In places the earth, which consists largely of peat, is burning. A farmer reported that the fire was now under control. He declared that it was spread by whirlwinds of flame, the blazing stubble being licked up by the whirlwinds and carried into the neighboring fields.

### SANTA CLARA.

**LEASED A DRIER.**—San Jose Mercury, Aug. 5: The Sorois Fruit Co. have leased the fruit-drying plant, formerly operated by A. N. Van Fleet, and will operate it in connection with their large plant. This will not be a packing house, but simply a drier.

**WINERY BURNED.**—Mercury, Aug. 6: The winery of Mrs. C. F. A. Manino, located 2½ miles west of Campbell, was burned to the ground at an early hour yesterday morning. The loss of wine was considerable, and the buildings were valued at \$8000.

**DEFECTIVE FRUIT FALLS.**—San Jose Mercury, Aug. 5: During the early morning hours yesterday the high wind that prevailed in this section brought down a large quantity of growing fruit, especially prunes. Investigation showed that most of the fallen prunes are defective. It is believed that if all the defective fruit that was blown down by the wind is set aside there will be no trouble from that source during this season. The strong shaking that the heavy wind gave the trees probably removed all the defective prunes. If the growers are careful to pick up all the fruit which has fallen in this manner, the wind may have been an advantage rather than a detriment.

**AT THE DRIER.**—Campbell Visitor, Aug. 3: Everything has been a little more quiet at the drier this week. Apricots are

about gone and peaches are not numerous. As many as 25,000 trays of apricots were in stack or spread at one time this week. It would have taken more than their seventeen-acre ground to accommodate the output if the weather had not been good for drying purposes. So far 1,502,881 pounds of apricots, 14,869 pounds of peaches and about three tons of prunes have been received.

### SANTA CRUZ.

**LIME, SULPHUR AND SALT COM-MENDED.**—Watsonville Pajaronian, Aug. 2: Orchardists who gave the lime, sulphur and salt wash a thorough trial last spring—who mixed the best materials in proper proportions, and kept it well stirred—report that it is a "sure shot" on San Jose scale. It kills the pest, and at the same time acts as a life-renewing tonic to the trees. This report is in line with the experience of Santa Clara county orchardists. They now have no fear of San Jose scale as they know they can kill it. Other preparations may be easier to handle, but this one does the needed work thoroughly—and such results are what many orchards most need. The County Horticultural Commissioners did persistent and faithful work to get orchardists to use this preparation last spring, and their work has already resulted in a great saving to fruit growers. The Commissioners are worthy of highest praise for their splendid work.

### TULARE.

**MONEY IN DAIRYING.**—Tulare Advance: W. L. Sellers has ten cows which average seven milkers throughout the year, and average two and one-half gallons of milk a day. The average price realized is 13 cents a gallon, which makes 32½ cents a day for each cow, or \$830.34 a year for the milk of the seven cows. His last three months' receipts from the sale of milk are given, which is about an average of the business for the year: March \$106.90, April \$98.05, May \$98.10. This makes an average of \$101 a month. For the last four years Mr. Sellers has done the work himself, having made two trips a day with the delivery wagon.

### YOLO COUNTY.

**DAIRYING AND IRRIGATION.**—TO THE EDITOR:—Increasing attention is being paid to dairy interests in the vicinity of Woodland, especially since it has become apparent that the great resource of the county (grain growing) has begun to fail. The Woodland Creamery at its parent station has 132 patrons; the skimming station at Yolo (Cacheville), from which the cream is taken to Woodland, has eighteen or twenty patrons. The aggregate amount of milk brought in by these patrons reaches 20,000 pounds daily. This is double what it was one year ago. The creamery sold 25,000 pounds of butter during July; on the average it distributes about \$5000 per month among its patrons. The market for its product is mainly at Sacramento, and the demand exceeds the supply. The creamery obtains 2 cents per pound above San Francisco quotations. Warren Meyers is superintendent and butter maker; H. S. Joslyn, secretary of creamery. The matter of more extensive irrigation in Yolo county is being largely discussed. Recently the citizens have contributed one-half the expense of a survey of water sources by U. S. Government officials. Although the report of these surveyors has not been made public, they have severally expressed the opinion that Yolo county is exceptionally blessed in its natural conditions for irrigation. Clear lake is a reservoir which can be utilized to store up flood waters, and Cache creek, its outlet, is a natural distributor. The entire country, from Capay valley to the Sacramento river plains, may be made to blossom as the rose. The region under irrigation would be adapted to successful orange culture, being earlier than southern California. The Capay valley, at the stations of Rumsey and Guinda, sent sixty carloads of fresh fruit to market this season, being twice the amount marketed last year.

H. G. P.

### YUBA.

**HOP PICKING WILL BEGIN EARLY.**—Wheatland Four Corners, Aug. 4: The present hot weather is ripening the hop crop rapidly. Some time ago it was thought picking would not begin before the 20th, but it now appears that the hops will be ready by the 15th at the latest, and a few early yards may begin picking the latter part of next week. The price for picking has not yet been determined, but the owners cannot afford to pay fancy prices, as the hop business will not justify too great an expense. With the large crop of last year growers lost money. We know that one of the largest ranchers near town lost \$15,000 last season and we know of no one making a profit on the year's work. While the crop will be lighter than last season, the picking will be better for the laborer, as the vines are free from leafy vines and undergrowth.



## THE HOME CIRCLE.

### Our Biggest Fish.

When in the halcyon days of old I was a little tyke,  
I used to fish in pickerel ponds for minnows and the like;  
And oh, the bitter sadness with which my soul was fraught  
When I rambled home at nightfall with the puny string I'd caught;  
And oh, the indignation and the valor I'd display  
When I claimed that all the biggest fish I'd caught had got away.

Sometimes it was the rusty hooks, sometimes the fragile lines,  
And many times the treacherous weeds would foil my just designs,  
But whether hooks or lines or reeds were actually to blame,  
I kept right on at losing all the monsters just the same.  
I never lost a little fish—yes, I am free to say  
It always was the biggest fish I caught that got away.

And so it was when, later on, I felt ambition pass  
From callow minnow joys to nobler greed for pike and bass;  
I found it quite convenient when the beauties wouldn't bite,  
And I returned all bootless from the watery chase at night,  
To feign a cheery aspect and recount in accents gay  
How the biggest fish that I had caught had somehow got away.

And really fish look bigger than they are before they're caught—  
When the pole is bent into a bow and the slender line is taut,  
When a fellow feels his heart rise up like a doughnut in his throat  
And he lunges in a frenzy up and down the leaky boat.  
Oh, you who've been a-fishing will indorse me when I say  
That it always is the biggest fish you catch that gets away.

'Tis even so in other things—yes, in our greedy eyes  
The biggest boon is some elusive, never-captured prize;  
We angle for the honors and the sweets of human life—  
Like fishermen we brave the seas that roll in endless strife;  
And then at last, when all is done and we are spent and gray,  
We own the biggest fish we've caught are those that got away.

I would not have it otherwise; 'tis better there should be  
Much bigger fish than I have caught a-swimming in the sea;  
For now some worthier one than I may angle for that game,  
May by his arts entice, entrap and comprehend the same,  
Which, having done, perchance he'll bless the man who's proud to say  
That the biggest fish he ever caught were those that got away.

—Eugene Field.

### Absolution.

"When all the steady stars are lit,  
And the light sleeps, for weariness,  
Night stands with pitying hands outspread  
To give her pardon and to bless.  
Earth creeps so near to heaven then,  
That scarcely may one, watching, mark  
Where they are twain—so potent is  
The benediction of the dark!"

—Ainslee's Magazine.

### A Fair Exchange.

"I'm sure, Carrie, I don't know what better you could do," said the Widow Durrell, with a sigh, as she stood in the "smoke house," or summer kitchen, one May morning, her sleeves rolled up, doing the semi-weekly churning. "He's certainly a good match enough for any girl in town."

"But, mother, dear," answered Carrie, throwing her sun-bonnet on the floor and pouring water on a pan of greens she had just picked, "how am I to know what his intentions are? He may not want to marry at all."

"There, that is just like you, Cad Durrell," groaned the widow. "Not know what his intentions are! and he's been coming here off and on these six months. Of course Tom means to marry; he has a large farm, and be-

sides, he isn't that kind of a fellow to fool round like some that I know of."

"That may be, mother, but suppose Tom Stapleton doesn't care anything about me, but does care for somebody else."

Mrs. Durrell stopped working the golden mass of butter and looked her youngest daughter keenly in the face. All of the widow's girls, and there were four sisters, were comely maidens, but Carrie was decidedly the flower of the flock in this respect. Her appearance recalled Byron's description of Dudu:

"Large, languid and lazy,  
But of beauty that would drive you crazy."

She was tall and plump of form, with a velvet complexioned face, soft, dreamy blue eyes, a tipped-up, wicked little chin, lips just made to be kissed, and a swath of bronzy hair with sunlight shining in every curl and ripple. "Languid and lazy" she undeniably was; no vulgar haste about her. Her brisk, energetic mother had been heard more than once to wish that a wasp would sting Carrie just to see if she could get round any faster.

"Who should he care for, if it isn't you, I would like to know, Cad Durrell," ejaculated the widow, after a somewhat protracted glance, "if you weren't so mortally slow, you might have been settled before this time, same as Phoebe and Sally Ann. But, la! you'll grow gray first."

A ripple of silvery laughter issued from the sweet red lips, and the bronzed head was tossed aloft in pretty scorn.

"Why, mother Durrell, you certainly don't wish me to marry a man who doesn't want me; I think it's Lu that Tom is after, only he doesn't dare speak out."

"Lu sha'n't marry him, I'll be bound," cried her mother hotly. "You know that all along I've planned for her to marry Squire Raynor. She isn't strong enough to be a farmer's wife."

"But she's got faculty, you've always said," declared Carrie, with a peculiar smile.

"Yes, she has got faculty which you haven't," admitted the widow. "Her bread never burns, and her cream is sure to come butter. You never did have luck with such things."

Of all human afflictions a daughter who seemed created without the boon of "faculty" was the severest to a driving New England housewife like Mrs. Polly Durrell.

A slim, gypsy-looking girl, with great dark eyes, and wearing a crimson shawl eloquently over her black hair, entered the kitchen at that instant.

"Mother, Squire Raynor's asked me, and I am going—"

Mrs. Durrell looked up eagerly, and a warm flush crept into the matronly face. "Of course you've accepted him," she exclaimed.

"Oh, I don't mean that he has popped the question," said the girl, her eyes dropping and a pretty blush mantling the dark cheeks. "Why, mother, how you have upset me! As if Squire Raynor could think of me in that light. He's only asked me to teach the summer school. Do you think I can?"

"Of course you'll take it," cried the widow. "Why, it is just the chance you need above all others; and Lu, if you are smart, you can be mistress of Raynor Hall before Christmas."

Lu blushed still more hotly and dropped her scarlet face, while her shoulders gave a very slight upward motion. She cared more for a look from a certain pair of blue eyes than for all Squire Raynor's wealth, his big house, conservatories and all, but she did not care to tell her mother so.

"I think I will try the school at any rate," she said, after a while, very thoughtfully. "It is eighteen dollars a month and board, and I can walk the distance easy enough from home." And without stopping to hear her mother's further expression she tripped away merrily, humming.

"Don't you see how luck favors Lu," observed the widow. "She will win the Squire, and I don't know of anybody else would make him a happier or more

careful wife. Now, Carrie, if you can bring Stapleton to terms, I can go down to my grave feeling easy and knowing that you are all settled."

"Oh, mother, you musn't say anything about dying, yet," said Carrie, falling away from the main issue for reasons of her own. "But I am sure you need not worry about either Lu or me. We can take care of ourselves, I am sure."

"No woman can take care of herself," declared Mrs. Durrell, with strong assurance. "She needs a husband and children. I don't believe in single women at all. But it's no use talking to you, I suppose. Some folks don't know what's good for them," with which she gave a ball of butter a finishing slap as if to give emphasis to her words.

Carrie splashed the dandelions up and down in the water, and smiled placidly, her temper not at all disturbed by her mother's imputation concerning perceptive qualities; but the widow would have had an apoplectic fit if she had known all that was in her daughter's mind.

Lu's school began Monday of the second week after the conversation in the summer kitchen, and Mrs. Durrell never was so proud in her life as when she saw her daughter ride away with Squire Raynor in his canopied phaeton.

"Mark my word, she'll ride in that as her own before the year is out," she said to Carrie, "unless she's lost her faculty."

Mrs. Durrell was one of those who thought that faculty had quite as much to do in getting folks married as sentiment. Faculty ruled the world to her mind.

Some three weeks passed when one night Lu came home from school with a flushed face and an anxious brow.

"Well, it's my last day of school," she said, as she sat down with a sigh in the large rocker by the window and began fanning herself.

"Why, what's the matter, Lu?" asked her sister.

"Squire Raynor's two boys are sick and several others have left on account of sickness, and he told me this noon that he did not deem it advisable to continue the term any longer. Dr. Jones says it is smallpox, and there's a terrible panic."

"The smallpox! dear me, that is awful," exclaimed Mrs. Durrell. "Likely as not we shall all have it if you have been exposed. How unfortunate! I declare, we must use some precaution. I've read as how camphor is a good absorbent."

The next minute the widow was sprinkling them all and everything else in the room, with that powerful volatile.

"I do hope it won't spread," said Lu, earnestly. "I don't want to be marked for life," and she glanced shyly into the mirror.

"Goodness knows we don't want to be down with it, and haying coming on, and all the hired help to take care of," ejaculated the mother. "I wonder how it happened to break out in the squire's family?"

"He and little Frank were at Albany a fortnight ago, and I suppose the boy took the contagion some way, although there were no cases there that he knew of. It seems real hard for the squire. All his servants have left him, and he can't get any one to help him for love or money, not even Pauline Heath, the poorhouse hospital nurse. He offered me ten dollars a week to go up and do what I could."

"As if his children were anything to you," cried the widow. "You would have been sure to catch the disease, and perhaps have died with it. But men are awfully selfish."

"Mother," said Carrie, with a good deal of energy for her, "I don't think it would be Christian-like to let those children lie and suffer and stir neither hand nor foot to save them. I think that I shall go to Raynor Hall."

Mrs. Durrell gave a gasp of incredulous amazement.

"You go out to nurse Squire Raynor's children! You must be crazy, Cad Durrell."

"On the contrary, I was never more sane in my life," replied Carrie. "If

he can get no one else I will go tomorrow. I am sure it is my duty."

"Fiddlesticks! It's a duty to take proper care of one's self, and if you go up there I shall know you are not in your right mind." And Mrs. Durrell leaned back with a hollow groan, looking as if she really had doubts as to her daughter's sanity.

But Carrie was in earnest, and the next morning she went up to the great house that seemed very still and deserted.

"Don't ever come back till you have had it and got well, for I won't have you in the house. It's running plump in the face of Providence, and that I don't believe one has a right to do," said her mother, as Carrie walked away.

They were cold, cruel words, but the widow considered them eminently practical. "Of course she'll have it and die with it, it will be just her luck," she wailed. "I'd just as soon go and take a dose of strychnine."

Carrie had but little time to think of herself or anything else save her two little patients. Frank and Harry Raynor were very, very ill, and for days there was small hope of their recovery. Squire Raynor hardly left the darkened chamber, and only to the nurse and the old physician did he speak a word. But after three weeks' time the disease turned and the doctor pronounced the children out of danger.

"It's your care more than the doctor's skill, Miss Durrell," said the Squire. "How can I ever repay you?"

"You have already paid me for my work; as for the rest it was my duty to come," answered Carrie.

"The others did not think it was their duty to risk their lives to save my motherless boys," returned Squire Raynor, feelingly. "Why should you have done so? You are an angel and —"

"Oh, no, Squire Raynor, only a very common piece of clay," said Carrie, hastening away with a rather perturbed countenance.

But a couple of weeks afterwards, when Frank and Harry were out at play for the first time on the sunny lawn and Carrie sat on the porch doing crochet work, the Squire came out and gazed at the picture thoughtfully.

"Boys," said he, at length, "how would you like a mother, a real nice, new mother?"

"Oh ever so much," cried Harry; "that is, if we could have Miss Durrell."

"Oh you silly boy," began Carrie, but she was interrupted by the Squire. "You have heard their verdict, Miss Durrell—Carrie. You can make them happy, and—and—I love you. Will you not stay, Carrie, my Carrie, and make me happy?"

And he knew by the look in her eyes that she had not refused him.

Mrs. Durrell was thunderstruck when she learned the news. To think that after all, Carrie, who had no tact, no faculty for anything, should have won Squire Raynor, the great man of the village, "beat all," as she expressed it.

But the surprises were not all over, for Lu picked up courage the same night to tell her mother that young Stapleton had proposed, and that with her consent, they were to be married at Christmas. "Go along and marry him if you want to," cried her mother. "Girls are the queerest creatures in the world, and I really believe you have been conspiring against your poor mother, she who brought you into the world and slaved herself to death on your account."

"Why, mother, it is no such thing," said Lu, going and kissing her, "only we cannot send our hearts where we will. Love goes, you know; it does not come by calling."

"For all that, however, Mrs. Durrell insists that her two youngest girls must wilfully and unwarrantably defeated her matrimonial plans.—Portland Transcript.

THE color and character of walls have much to do with the lighting of a room, and experiments have shown



these percentages of reflection by different wall materials: Black velvet 0.4, black cloth 1.3, black paper 4.5, dark blue 6.5, dark green 10.1, pale red 16.2, dark yellow 20, pale blue 30, pale yellow 40, pale green 46.5, pale orange 54.8, pure white 70, mirror covering 92. Dull or varnished paint also has effect. Aside from mirrored walls, white varnish ensures the best-lighted room, and this may be advantageously used in conjunction with incandescent gaslight as the most economical source of artificial illumination.

#### Infanta Eulalie on the Sphere of Woman.

From what I have said of independence, it may be inferred that I favor a wider sphere for women.

In France, yes; but not in the United States. There the sphere of women is, to say the least, wide enough. They have made their way into most of the professions. They practice medicine and law; they preach; they edit newspapers and magazines. A greater responsibility still is that they teach almost all the youth of the country. Women are not free to enter every walk of life. Nature has not made them fitted for some spheres, just as it has not adapted man to every pursuit. Women are quicker to catch an idea than men. They know some things by intuition. But their intellects are too light for the heavier studies, and they are not endowed with the stolidity of mind which men possess. The women of every country should be held in high esteem, and if they drive the men out of certain masculine callings the strong sex will lose respect for them. One can always judge of the civilization of a country by the respect shown its women. The apotheosis of the American girl is one of the most inspiring characteristics of American society. Every tourist observes the chivalrous deference which American gentlemen show to women. I have not been through the extreme West, but I have been told that even the rough cowboy of the cattle ranch becomes gentle and deferential the moment a woman appears. The same is said of the miners in their camps. I have heard an American railway employe boast that he was a gentleman, and he promptly added the proof, which was that he never swore in the presence of ladies. In Paris gentlemen keep their hats in their hands longer when speaking to ladies. Paris is the most hat-lifting city in the world. But in the United States young women have the country at their feet. Society seems to have been specially organized for them. Friends, parents, brothers, uncles and aunts vie with each other in making everything bend to the comfort and convenience of the American girl.—*Leslie's Monthly*.

#### Judging Table Linen.

There is nothing so difficult to judge as table linen; no fabric where adulterations or exact qualities are so difficult to discern. In other than high-grade establishments, where one must depend upon personal judgment for the purity of a fabric, there are a few points to keep in mind. Pure linen is hard and slippery, never soft and pliable. If a moistened finger be applied to an all-linen cloth, the moisture will at once appear on the other side, whereas in mixed goods it will appear slowly or not at all. The flax odor is always noticeable in linens, and every woman should recognize it or its absence.

#### Courtship in the Canaries.

Some curious customs are in force in the Canary islands in the case of engaged couples. Not the least peculiar of these is that the lover is never allowed to enter the home of his fiancée during their engagement, but must conduct his courtship from the pavement. The girl is allowed to sit in the window to receive his attentions, but as every one lives in flats in these islands there is often considerable distance between the two and much craning of necks is necessary.

#### What Shall We Do With Our Boys?

How often has the question arisen, "What shall we do with our boys? Shall we make them farmers, artisans, soldiers, professors or merchants?" The thought which seems uppermost in our minds, and which apparently is our highest concern, is how to make successful bread winners, place seekers and fortune hunters. It is quite natural that we should see our sons well placed in life and in a position to become self-helpful and self-supporting. To feel otherwise might encourage them to become drones and parasites and a burden upon society. It is not an unreasonable desire to hope to see them hold high places, wielding power and the possessors of wealth, but let us beware lest, in our desire to push them onward in life, we forget that our first aim should be to make them men.

I have in mind a parent whose son occupies a humble place in society and who is comparatively unknown, but whose sterling character and high-mindedness have won for him the respect, the esteem and the love of all who know him. Who can measure the comfort, the joy and the blessedness such a son must bring to parents?

Woe unto the son who has left him as a legacy from an indulgent parent a mountain of gold and an enfeebled body, a weak mind and a depraved heart. Sooner or later such a son must scatter to the winds the bags of gold which may represent a lifetime of striving and earning, of saving, and pinching. Sooner or later such a son must end at the point where is father began, but with health gone, mind gone, character gone. The father, who should have proven his best friend, has proven his worst enemy. The richest legacies we can leave our sons are strong bodies, clear heads and pure hearts. These, as a rule, bring all the wealth and honor they deserve. These qualities must add to the betterment of the race and to the achievement of the highest civilization.

Let us, in the language of Emerson, impress upon our sons and daughters that "he is great who confers the most favors. He is base who receives favors and renders none." No greater favor can be rendered society than to send forth young men and women who value character above all things else, who look upon right acting and pure living as life's most valued achievements.

If we but send forth our boys into the world well grounded in their duties to God and to man; if we have trained their consciences so that they will do right, not because it pays better, but because it is right, and avoid wrong because it is wrong; if they are filled with the knowledge that God's law cannot be transgressed without lasting injury to body and soul, and that man's laws cannot be violated without damage to society and to all our fellows; if we can cultivate in our boys clear heads, so that they can quickly see the right and hate the wrong, we shall have done the best that, as parents, it was within our power to do. We shall have performed our fullest duty to God, to society and to our boys. They may never rise to power or fame, they may never enjoy wealth or station, but they are sure to prove to us, to society and themselves a blessing and a source of unending happiness.

Let the highest purpose and aim in life be the attainment of character, the cultivation of a well-developed and well-rounded manhood and womanhood. Let us, first of all, strive after truth and honesty, virtue and unselfishness. Let us be content with whatever station in life, with whatever share of wealth, of place, of power, these qualities may bring us, and let all our energies tend and bend in the direction of sending our daughters forth into the world as pure and noble women and our sons as men—as high-minded, pure-minded men—men whose purpose in life it will be to look upon honor as a most sacred thing, to look upon virtue as a thing to be sought for itself alone, to look upon a clear conscience as the crowning glory of character, to look upon worldly success as of value only when gained by the aid and not at the expense of character.—*H. Weinstock*.

#### Care of Enameled Bath Tubs.

In order to know how to take the best care of porcelain enameled bath tubs, it is desirable to understand the process of their manufacture. Manufacturers state that they are made of the best quality of cast iron, upon the inside surface of which is placed a lining or coating of enamel.

In order to apply this coating of enamel, the casting, after being thoroughly cleaned, is heated to a high temperature and the enamel applied; this causes it to become thoroughly fused into the iron and it virtually becomes a part of the metal, producing a hard, white, non-porous and non-absorptive surface, combining the beauty of china with the strength and durability of iron.

Bath tubs thus produced are easily kept clean and pure, affording no opportunity for the lodgment of filth and disease germs.

It should not be necessary to caution our readers that these tubs should be used for bathing purposes only, as when otherwise used they are liable to abuse.

In cleaning enameled tubs the makers recommend the use of warm water and soap. Never use ammonia nor any cleaning compounds of gritty nature, as these materials destroy the glaze on the enamel, causing it to become discolored.

Enamel being of a similar nature to china, the same care in cleaning should be exercised.

#### "When the Pie Was Opened."

Nursery rhymes are not always the silly, unreasonable things they appear. "Sing a song of sixpence" is undoubtedly merely the refrain of some educated person in the long ago who had chanced upon an old cooking book written in Venice in 1543 in which, under the title of "Epulario, or the Italian Banquet," there is a detailed recipe explaining how to make pies so that the birds may be kept alive in them and fly out when the pie is cut up; so that the famous nursery pie of four and twenty blackbirds is not at all mythical. A Japanese traveler in more recent years tells of a banquet he attended at which a number of small birds flew out of the pie and carried welcoming messages attached to their legs to their various guests.

#### Keep the Children Busy.

Teach children to do little things about the house. It trains them to be useful, not awkward in later and more important affairs; it gives them occupation while they are small, and it really is an assistant to the mother in the end, although she always feels during the training period that it is much easier to do the things herself than to show another how. This last excuse has done much to make selfish, idle, unhappy members of an older society, and should be remembered, in its effects, by the mother, while her little ones are beginning to learn all things, good and bad, at her knee. Occupation makes happiness, and occupation cannot be acquired too young.

#### Measuring Time in Turkey.

The Turks are slow or fast as you choose to look at it, in the matter of time. Their day begins at sunset, which is always 12 o'clock. Two watches, therefore, are convenient for keeping track of the Turkish time which controls the steamers on the Bosphorus, and the railway and Eastern European time, which regulates your hotel and most other engagements. In fact special watches have been devised to meet the exigencies of the case, showing on one face the two dials to indicate the comparative times. Moreover, as sunset varies according to the season, it becomes necessary for the Turk to set his watch at least once every five days.

THE QUEEN of Italy weighs 176 pounds, Queen Victoria 171.6 pounds, the Queen of Spain 147.4 pounds, the Queen of

Belgium 143 pounds, the German Empress 136.4 pounds, the Queen of Portugal 132 pounds, the Czarina 129.8 pounds, the late Empress of Austria 136.8 pounds.

### DOMESTIC ECONOMY.

#### Hints to Housekeepers.

A good cement for tin is made by dissolving equal parts of shellac and common resin in strong spirits of wine until of the required thickness.

To prevent steel brooches and ornaments from becoming rusty, keep them when not in use in a box with a little powdered starch or arrowroot.

Nutmegs are slight stimulants, and when administered in warm water they make a gentle nervous sedative and a fair stomachic.

A dish drainer is one of the handiest of cooking utensils. Wash the dishes in hot suds, pile them in the drainer, which sets in a large shallow pan, and pour clear hot water over them. When they are cool you will find them dry and shining without wiping them.

A good furniture polish is made as follows: One ounce beeswax, one-quarter of an ounce white wax, one ounce castile soap and one pint of boiling water. When same has been allowed to cool, add half-pint turpentine and half-pint spirits of wine. Mix well; rub on with one cloth and polish with another.

Gloves, when taken off, should not be rolled up into a ball. They should be drawn gently from the hands, then smooth the fingers, and they should be left to air for a short time before putting away full length in the glove box. It is a good plan to have two or three pairs in use at the same time. They will last twice as long.

Many housekeepers have been annoyed by having the colors of their embroidered centerpieces and doilies grow faded and dingy after being laundered a few times. This is not necessary if they are washed properly. Prepare a suds of lukewarm water and good soap, and add a little borax. Put the pieces in, one by one, and rub gently between the hands until clean. The borax helps to remove the dirt and does not injure the colors. Rinse through two waters with a little bluing in the second, and hang in the shade to dry. After they have been dampened and rolled up an hour or two, iron on the wrong side. Very little starch is ever used on such articles, many housekeepers never use any.

#### Cooking Meringues and Custards.

It seems hardly necessary to repeat that all dishes containing chiefly the white of eggs should be slowly and steadily cooked. It requires twenty minutes' cooking in an oven so "slow" that at the end of that time the meringue will be only delicately brown, to bring it to perfection. It will then be risen to nearly double its original bulk. If it rises slowly in this way, it will be firm and tender and will not shrink back. If the meringue is cooked rapidly, as meringues usually are, in a "few moments," the meringue will rise and fall after it is taken from the oven. Some people consider this the legitimate way to have a meringue, and do not apparently know that such meringue is as much a culinary blunder as heavy cake or "wheyed" custard. Custard wheys for the same reason that meringue falls—too great heat. The only way to bake a custard successfully is to put it in earthen cups and set them in a pan of hot water which reaches nearly up to the depth of the custard in the cups. If the fire is quite hot, the water will prevent the custard from separating or forming whey. When a boiled custard "wheys" it is because it has been cooked too long. The egg separates from the milk and hardens as it does when the egg is boiled in the shell. Not only does a boiled custard whey if it is cooked too long, but it wheys if it is not stirred all the time it is boiling and after taking it up until it has cooled a little. In a few moments it will "set" by cooling, so that the eggs can not separate.



## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Aug. 8, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Aug.	Sept.
Wednesday.....	73 3/4 @ 74 1/4	74 1/4 @ 75 1/4
Thursday.....	74 1/4 @ 75 1/4	75 1/4 @ 76 1/4
Friday.....	73 3/4 @ 74 1/4	74 1/4 @ 75 1/4
Saturday.....	74 1/4 @ 75 1/4	75 1/4 @ 76 1/4
Monday.....	74 @ 75 1/4	75 1/4 @ 76 1/4
Tuesday.....	75 @ 76 1/4	76 1/4 @ 77 1/4

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	Sept.	Dec.
Wednesday.....	6s 0 1/2 @ 1 1/4	6s 1 1/4 @ 1 1/2
Thursday.....	6s 0 1/2 @ 1 1/4	6s 1 1/4 @ 1 1/2
Friday.....	6s 0 1/2 @ 1 1/4	6s 1 1/4 @ 1 1/2
Saturday.....	6s 0 1/2 @ 1 1/4	6s 1 1/4 @ 1 1/2
Monday.....	6s 0 1/2 @ 1 1/4	6s 1 1/4 @ 1 1/2
Tuesday.....	6s 1 1/4 @ 1 1/2	6s 2 1/4 @ 1 3/4

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec., 1900.	May, 1901.
Thursday.....	1 11 3/4 @ 1 10 3/4	— @ —
Friday.....	1 10 3/4 @ 1 11 3/4	— @ —
Saturday.....	1 11 @ —	— @ —
Monday.....	1 10 3/4 @ 1 12	— @ —
Tuesday.....	1 12 @ 1 13 1/4	1 18 1/2 @ 1 18
Wednesday.....	1 13 @ 1 12 1/4	1 18 1/4 @ —

## WHEAT.

The wheat market has been exceedingly quiet during the greater part of the time since last review, with no important developments to materially affect values either up or down. Locally, the demand continues greatly restricted on account of light supply of ships and stiff ocean freight rates, this being sufficient to cause dullness and lack of firmness, but in addition to this, there is absence of any very active or urgent foreign demand at current rates. Of course, if ocean tonnage was in liberal supply, easier freights might make easier prices for wheat abroad and thus make more of an inducement for foreign buyers to take hold. There is no certainty, however, that wheat would thus be made cheaper to foreign consumers, as any declines in freights might be fully offset by advances in prices of wheat, such having been frequently the experience of the past, under similar conditions. The yield in this State is falling far short of early estimates, and this is the most substantial reason to-day for wheat here being held by the majority of owners above current comparatively low figures. The visible supply of the United States east of the Rockies this week showed an increase of 1,666,000 bushels. Stormy weather was yesterday reported doing damage to European crop. Market here closed quiet.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, \$1.10 1/2 @ 1.13 1/4.  
May, 1901, delivery, \$1.18 @ 1.18 1/2.  
Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at \$1.13 @ 1.12 1/2; May, 1901, \$1.18 1/4 @ —.

California Milling.....	\$1 10 @ 1 15
Cal. No. 1 shipping, alongside.....	1 05 @ 1 07 1/2
Oregon Valley.....	1 05 @ 1 07 1/2
Washington Blue Stem.....	1 07 1/2 @ 1 12 1/4
Washington Club.....	1 02 1/2 @ 1 07 1/2
Off qualities wheat.....	1 00 @ 1 02 1/2

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-1900.	1900-01.
Liv. quotations.....	65 00 @ 65 0 1/2	65 30 @ 65 3 1/2
Freight rates.....	31 1/4 @ —	37 1/2 @ 40s
Local market.....	\$1 03 3/4 @ 1 06 1/4	\$1 05 @ 1 07 1/2

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## LOCAL STOCKS OF GRAIN.

Stocks of grain in Call Board warehouses on August 1st and July 1st:

Tons—	Aug. 1st.	July 1st.
Wheat.....	*127,165	126,125
Barley.....	157,274	36,283
Oats.....	4,525	2,916
Corn.....	263	385

\*Including 79,548 tons at Port Costa, 46,807 tons at Stockton.

†Including at Stockton, 30,606 tons at Port Costa, 16,466 tons at Stockton.

Stocks of wheat in Call Board warehouses on 1st inst. show an increase of 640 tons for the month of July. A year ago there were 78,185 tons wheat in Call Board warehouses.

## FLOUR.

Trade is slow, with market easy in tone, and there is nothing to warrant antici-

pating any change for the better in the near future. Spot supplies are not particularly heavy, but are liberal as compared with existing very limited requirements. Large buyers show no inclination to take hold freely, and if they did manifest disposition to purchase in large quantities, it would be only at comparatively low prices.

Superfine, lower grades.....	\$2 25 @ 2 50
Superfine, good to choice.....	2 60 @ 2 80
Country grades, extras.....	3 15 @ 3 40
Choice and extra choice.....	3 40 @ 3 65
Fancy brands, jobbing.....	3 60 @ 3 75
Oregon, Bakers' extra.....	2 90 @ 3 25
Washington, Bakers' extra.....	2 90 @ 3 40

## BARLEY.

The market is fully as firm as last noted, so far as current rates for immediate deliveries of desirable qualities are concerned, either Chevalier, Brewing or Feed descriptions. Inferior grades move slowly, and it is sometimes difficult to effect transfers of this sort of barley at lowest quotations. Poor Chevalier will not command any more than the most ordinary feed stock. The largest transfers are on export account, and only No. 1 to choice is desired for shipment. Three full cargoes of barley, aggregating 10,000 tons, were cleared the past week for Europe.

Feed, No. 1 to choice.....	75 @ 80
Feed, fair to good.....	72 1/2 @ 75
Brewing, No. 1 to choice.....	82 1/2 @ 90
Chevalier, No. 1 to choice.....	92 1/2 @ 97 1/2
Chevalier, No. 2.....	80 @ 85
Chevalier, poor.....	75 @ 80

## OATS.

The very healthy state of the oat market previously noted continues to be experienced. Further heavy shipments have been made to Japan, about 500 tons going out per last steamer, a large portion of this invoice being rolled oats. The Government is also making heavy requisitions for this cereal. Present supplies are mainly Reds and Blacks, which will continue to be the case until Oregon and Washington begin to forward freely.

White Oats, fancy feed.....	1 25 @ 1 30
White, good to choice.....	1 17 1/2 @ 1 25
White, poor to fair.....	1 10 @ 1 15
Gray, common to choice.....	1 12 1/2 @ 1 17 1/2
Milling.....	1 20 @ 1 30
Surprise, good to choice.....	1 25 @ 1 35
Black Russian.....	1 02 1/2 @ 1 12 1/2
Red.....	1 05 @ 1 22 1/2

## CORN.

Market shows firmness for all descriptions, with supplies light, and there is nothing in surface indications to warrant anticipating materially easier rates for some time to come. The demand is not very brisk at current figures, but present stocks do not admit of any special activity.

Large White, good to choice.....	1 22 1/2 @ 1 25
Large Yellow.....	1 17 1/2 @ 1 20
Small Yellow.....	1 40 @ 1 50
Eastern, in bulk (carload lots).....	1 15 @ 1 17 1/2

## RYE.

Absence of firmness is more pronounced than at any previous date this season. Shippers name 91 1/2c. for No. 1, delivered at Port Costa. Small quantities sell on local account at a little higher range.

Good to choice, new.....	92 1/2 @ 97 1/2
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## BUCKWHEAT.

Market is almost bare of offerings and must remain so until new crop puts in an appearance. No large quantities could be placed at the figures nominally current.

Good to choice.....	2 00 @ 2 10
Silverskin.....	— @ —

## BEANS.

Market is in the main rather quiet, as is natural at this time of year, with the new season near at hand. Aside from the recent purchasing on Government account, there has been no noteworthy inquiry from any quarter. There are not many Beans offering, however, and Lady Washingtons, Bayos and Pinks are about the only kinds in this center admitting of anything like wholesale transactions. Pea Beans are now wholly out of stock. In quotable rates there are no special changes to record.

Pea, fair to good, 100 lbs.....	— @ —
Small White, good to choice.....	3 50 @ 3 75
Lady Washington.....	2 75 @ 3 00
Butter, small.....	— @ —
Butter, large.....	— @ —
Pinks.....	2 65 @ 2 90
Bayos, good to choice.....	2 65 @ 2 90
Reds.....	3 25 @ 3 75
Red Kidneys.....	— @ —
Limas, good to choice.....	5 25 @ 5 35
Black-eye Beans.....	3 25 @ 3 75
Horse Beans.....	2 25 @ 2 50
Garbanzos, large.....	2 50 @ 2 75
Garbanzos, small.....	2 00 @ 2 25

Advices by recent mail from New York give the following review of the bean market, prices quoted being per 60-lb. bushel:

The same conditions prevailed this week that have been noted for some time past. Demand has been of a very restricted character, exporters getting no orders to speak of and jobbers buying only in a

small way as immediate needs required. Inability to move stock has increased the pressure to sell and prices have been lowered on nearly all varieties. Best marks of Marrow are now offering generally at \$2.05, only an occasional small lot of fancy large held 2 1/2c. higher; exporters could buy easily at \$2.05 f. o. b. Holders are trying to get \$1.97 1/2 @ 2 for choice Medium in barrels, but make no progress, and the finest grade of Pea is seeking custom at \$2.15 @ 2.17 1/2 in barrels, and about 5c. less for bags. There was no steamer this week to the ports that usually take Red Kidney, and practically no business was done in consequence. Exporters have cabled \$2.02 1/2, and it is possible that the best stock could be bought for less. White Kidney steady because there are so few of them. Yellow Eye dull. Turtle Soup wholly neglected and nominal. Lima steady but quiet at \$3.52 1/2 @ 3.55. Very little movement in foreign Pea or Medium and values are weak and unsettled; outside quotations are extreme. Green and Scotch peas steady under slightly firmer Western advices.

## DRIED PEAS.

Supplies at present in this center are confined to small holdings in the hands of local millers, and market is firm at quotations.

Green Peas, California.....	2 40 @ 2 50
Niles Peas.....	2 15 @ 2 25

## WOOL.

Since last review there have been further transfers. Most of the choice Northern Spring has passed into second hands. Prospects are favorable for other Wools receiving attention from buyers at an early date. Market shows a decidedly improved tone. Although Wools are not quotably higher, current rates are being well maintained.

Humboldt and Mendocino.....	16 @ 18
Northern, free.....	14 @ 16
Northern, defective.....	11 @ 13
Middle Counties, free.....	14 @ 16
Middle Counties, defective.....	11 @ 13
Southern Mountain, 12 mos.....	8 @ 10
Southern Mountain, free, 7 mos.....	9 @ 11
Southern Mountain, defective, 7 mos.....	8 @ 10
Oregon Valley, fine.....	17 @ 19
Oregon Valley, coarse to medium.....	16 @ 17
Eastern Oregon, choice.....	15 @ 16
Eastern Oregon, fair to good.....	11 @ 14
Nevada, as to condition.....	14 @ 16
San Joaquin Fall Lambs.....	8 @ 9

## HOPS.

In all essential respects the market remains the same as previously noted. Some recent purchases of new Oregon Hops on contract are reported at 9c. New to arrive are quotable at 9 @ 10c. for good to choice. There are very few old Hops now arriving or in stock. Not many new are expected on market before latter part of next month.

Good to choice, 1899 crop.....	7 @ 10
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The following report of the hop market, from a New York authority, comes through by mail of recent date:

Interest is beginning to center quite largely in the progress of the growing crop. In New York State the vines have made better growth of late under more favorable weather conditions, but it is said that many of the yards look weak, and that under no conditions will the yield be heavier, and perhaps somewhat less, than last year. Growers are expecting better quality, as the vines seem to be free of lice. California will have less hops this year—possibly 15% to 20%. Eastern Washington looks well, but in the western part of the State the outlook is not so good. Advices from Washington are rather conflicting, but the general impression is that fewer hops will be harvested. The situation in England is somewhat improved, but lice and fly are still present in large numbers. Honey dew and mold are also complained of. It certainly looks as if the English crop will be much short of last year, and the quality is not promising. For the season of year and considering the class of stock offering, there has been fair business on the local market. Brewers have called for considerable lots, partly on old contracts and partly new purchases, and the holdings have been reduced in a satisfactory manner. Prices have ruled firm, especially on best grades, but no effort was made to establish an advance.

## HAY AND STRAW.

Market for Hay has shown a little better tone than for a week or two preceding, owing to decreased arrivals and lighter offerings. There has been no scarcity of supplies, however, and little opportunity for the exertion of selling pressure, especially on common to medium grades. Firmness was mainly on choice to select qualities.

Wheat.....	8 00 @ 12 00
Wheat and Oat.....	8 00 @ 11 00
Oat.....	7 00 @ 10 00
Barley.....	5 50 @ 8 50
Volunteer.....	4 50 @ 6 50

Alfalfa.....	6 00 @ 7 50
Stock.....	5 00 @ 6 50
Compressed.....	8 00 @ 12 00
Straw, 1/2 bale.....	25 @ 37 1/2

## MILLSTUFFS.

Bran, Middlings and Shorts were in ample supply for current needs and market was easy in tone, without being appreciably lower. Rolled Barley was steadily held at below noted advance. Milled Corn products did not incline in favor of buyer.

Bran, 1/2 ton.....	12 00 @ 13 00
Middlings.....	15 00 @ 18 00
Shorts Oregon.....	13 00 @ 15 00
Barley, Rolled.....	16 50 @ 17 00
Cornmeal.....	25 00 @ 25 50
Cracked Corn.....	26 50 @ 27 00

## SEEDS.

Samples of new crop Mustard Seed have been on market, but no transfers have been yet reported, and nothing has transpired affording a basis for quotations. The little business doing in Bird Seed is at a notably unchanged rates.

Mustard, Trieste.....	Per ctl. — @ —
Mustard, Yellow.....	— @ —
Flax.....	— @ —

Canary.....	3 1/2 @ 4
Rape.....	2 @ 3
Hemp.....	3 1/2 @ 4
Timothy.....	— @ —
Alfalfa, Utah.....	— @ —

## BAGS AND BAGGING.

Nothing of consequence doing in Grain Bags, and market is weak at the quotations. Fruit Sacks are in fair request, with values for the same ruling steady. Wool Sacks are moving to a moderate extent on account of Fall clip and at unchanged values.

Calcutta Grain Bags, buyer June-July.....	— @ —
Calcutta Grain Bags, spot.....	6 @ 6 1/2
San Francisco Grain Bags, 22x36, spot.....	6 @ 6 1/2
State Prison Bags in lots of 2000, 1/2 100.....	5 65 @ —
Wool Sacks, 4 lbs.....	— @ 32 1/2
Wool Sacks, 3 1/2 lbs.....	— @ 28 1/2
Fleece Twine.....	7 1/2 @ —
Gunnies.....	— @ 12 1/2
Bean Bags.....	4 1/2 @ 5 1/2
Fruit Sacks, cotton.....	6 1/2 @ 7 1/2

## HIDES, PELTS AND TALLOW.

The same unsatisfactory condition of affairs for sellers as before noted continues to prevail in the Hide and Pelt market. Tallow is in moderate request at ruling figures, with stocks light.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	9 1/2 @ 8 1/2	8 1/2 @ 7 1/2
Medium Steers, 48 to 56 lbs.....	8 1/2 @ 7 1/2	7 1/2 @ 6 1/2
Light Steers, under 48 lbs.....	8 1/2 @ 7 1/2	7 1/2 @ 6 1/2
Heavy Cow Hides, over 50 lbs.....	8 1/2 @ 7 1/2	7 1/2 @ 6 1/2
Light Cow Hides, under 50 lbs.....	8 1/2 @ 7 1/2	7 1/2 @ 6 1/2
Wet Salted Kip.....	8 1/2 @ 7 1/2	7 1/2 @ 6 1/2
Wet Salted Veal.....	8 1/2 @ 7 1/2	7 1/2 @ 6 1/2
Wet Salted Calf.....	9 @ 8	8 @ 7
Dry Hides.....	15 @ 12	12 @ 10
Dry Kip and Veal, 11 to 16 lbs.....	15 @ 12	12 @ 10
Dry Calf, under 4 lbs.....	15 @ 12	12 @ 10
Salted Horse Hides, large.....	2 00 @ —	— @ —
Salted Horse Hides, medium.....	1 50 @ —	— @ —
Salted Horse Hides, small.....	1 00 @ —	— @ —
Dry Horse Hides, large.....	1 50 @ —	— @ —
Dry Horse Hides, small.....	75 @ 1 00	— @ —
Dry Cotts' Hides.....	50 @ —	— @ —
Pelts, long wool, 1/2 skin.....	1 00 @ 1 25	— @ —
Pelts, medium, 1/2 skin.....	70 @ 90	— @ —
Pelts, short wool, 1/2 skin.....	35 @ 60	— @ —
Pelts, shearling, 1/2 skin.....	20 @ 35	— @ —
Deer Skins, best summer.....	27 1/2 @ 30	— @ —
Deer Skins, good medium.....	20 @ 22 1/2	— @ —
Deer Skins, thin winter.....	— @ 10	— @ —
Elk Hides.....	10 @ 12	— @ —
Tallow, good quality.....	4 @ —	— @ —
Tallow, No. 2.....	3 @ 3 1/2	— @ —
Goat Skins, perfect.....	30 @ 37 1/2	— @ —
Goat Skins, damaged.....	10 @ 20	— @ —
Kid Skins.....	5 @ 10	— @ —

## HONEY.

There is not much honey coming forward at present from any quarter, neither is there very brisk demand locally or for shipment at full current rates. Water white honey is the scarcest sort, and market for this description shows the most firmness.

Extracted, White Liquid.....	7 1/2 @ 7 3/4
Extracted, Light Amber.....	6 1/2 @ 7 1/4
Extracted, Amber.....	5 1/2 @ 6
White Comb, 1 lb frames.....	12 @ 12 1/2
Amber Comb.....	9 @ 11
Dark Comb.....	6 1/2 @ 7 1/2

## BEESWAX.

Spot stocks are of small volume and there is no evidence of there being much in the interior. Offerings of domestic quality meet as a rule with prompt custom.

Good to choice, light, 1 lb.....	26 @ 28
Dark.....	24 @ 25

## LIVE STOCK AND MEATS.

Same rates last quoted continue to prevail for Beef, with offerings about equal to demand. Veal arriving is almost wholly large size, for which the market is easy in tone. Mutton and Lamb brought



much the same figures as preceding week, with arrivals just about enough for requirements. Hogs met with a steady market, receipts of domestic being light; some Eastern Hogs were landed here this week.

Beef, first quality, dressed, net lb.....	6 @—
Beef, second quality.....	5 1/2 @—
Beef, third quality.....	5 @—
Mutton—ewes, 7@7 1/2; wethers.....	7 1/2 @ 8
Hogs, hard grain fed, medium.....	5 1/2 @ 6
Hogs, small, fat.....	5 1/2 @ 6
Hogs, large, hard.....	5 1/2 @—
Hogs, acorn-fed.....	— @—
Hogs, feeders.....	5 1/2 @ 5 1/2
Hogs, country dressed.....	6 @ 6 1/2
Veal, small, lb.....	8 @ 10
Veal, large, lb.....	8 @—
Lamb, spring, lb.....	8 @ 9

## POULTRY.

The market has shown little improvement. Heavy arrivals of Eastern in connection with fair receipts of domestic caused an excess of offerings, especially of common stock, for which low prices ruled. Most of the local product was either too small or in too poor flesh to be desirable. Broilers in fine condition have been meeting with slightly improved demand. Pigeons sold at a moderate advance.

Turkeys, dressed, lb.....	— @—
Turkeys, live hens, lb.....	10 @ 11
Turkeys, live gobblers, lb.....	9 @ 10
Hens, California, lb dozen.....	3 50 @ 5 00
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	3 50 @ 5 00
Fryers.....	3 00 @ 3 50
Broilers, large.....	2 50 @ 3 00
Broilers, small.....	2 00 @ 2 25
Ducks, old, lb dozen.....	3 00 @ 4 00
Ducks, young, lb dozen.....	3 00 @ 4 00
Geese, pair.....	1 25 @—
Goslings, pair.....	1 37 1/2 @ 1 50
Pigeons, old, lb dozen.....	1 50 @ 1 75
Pigeons, young.....	1 50 @ 1 75

## BUTTER.

Prices for choice to select fresh have been again marked up, but the firmness of the market does not extend to common qualities. Cold storage and packed butter, which is in liberal stock, is being taken by most consumers in preference to poor fresh.

Creamery, extras, lb.....	24 @—
Creamery, firsts.....	22 @ 23
Creamery, seconds.....	21 @ 22
Dairy, select.....	22 @—
Dairy, seconds.....	19 @ 20
Dairy, soft and weedy.....	— @—
Mixed store.....	15 @ 16
Creamery in tubs.....	19 @ 21
Pickled Roll.....	18 @ 20
Firkin, California, choice to select.....	19 @ 21
Firkin, common to fair.....	17 @ 18

## CHEESE.

While there is a fair demand, considerable more trade than exists at present could be accommodated, supplies in the wholesale depots being of fairly liberal proportions. The market is easy in tone, but is not quotably lower.

California, fancy flat, new.....	9 1/2 @—
California, good to choice.....	8 1/2 @ 9
California, fair to good.....	8 @ 8 1/2
California Cheddar.....	— @—
California, "Young Americas".....	9 1/2 @ 10 1/2

## EGGS.

There were no heavy arrivals of choice to select fresh, desirable as to size, color, etc., and for such stock the market was moderately firm at the prevailing figures, but eggs showing the effects of hot weather or which were otherwise faulty, moved slowly and found custom only at rather low prices. Eastern were in fair receipt. Considerable trade is now being diverted to Eastern and cold storage stock, owing to these being relatively cheaper than fresh.

California, select, large, white and fresh.....	23 @—
California, select, irregular color & size.....	21 @ 22
California, good to choice store.....	18 @ 19
Eastern, as to section and grading.....	15 1/2 @ 19
Eastern, cold storage.....	— @—

## VEGETABLES.

Most kinds of vegetables now arriving were in liberal supply and went at generally easy rates. Onions sold at a lower range than preceding week, demand being light. Tomatoes ruled a little more favorable to sellers than last quoted, arrivals showing decrease. Choice Peas were in light receipt and prices for the same inclined in favor of the producer.

Beans, String, lb.....	1 1/2 @ 3
Beans, Wax, lb.....	2 1/2 @ 4
Beans, Lima, lb.....	— @—
Cabbage, choice garden, lb 100.....	50 @—
Cauliflower, lb dozen.....	50 @—
Coumbers, Bay, lb box.....	20 @ 35
Egg Plant, lb box.....	60 @ 75
Garlic, lb.....	2 1/2 @ 3
Green Corn, sack.....	75 @ 1 25
Green Corn, Alameda, lb crate.....	1 00 @ 1 50
Onions, Yellow Danver, lb cental.....	65 @ 75
Okra, Green, lb box.....	50 @ 75
Peas, Sweet, garden, lb.....	2 @ 3
Peppers, Green Chile, lb box.....	25 @ 50
Poppers, Bell, lb.....	30 @ 60
Pickle Cucumbers, No. 1, lb box.....	40 @ 60
Pickle Cucumbers, No. 2, lb box.....	35 @ 50
Squash, Summer, lb large box.....	20 @ 35
Tomatoes, River, lb large box.....	60 @ 1 00

## POTATOES.

While receipts were by no means heavy

in the aggregate, there were more potatoes on market than required for the immediate demand, and prices kept at a low range. Arrivals continue to be mainly from Sacramento river district, although Salinas Valley or Monterey Burbanks are beginning to come forward in quotable quantity.

Burbanks, River, lb cental.....	30 @ 70
New Potatoes, lb cental.....	30 @ 70
Sweet Potatoes, Yellow, lb cental.....	2 00 @ 3 00

## The Fruit Market.

## FRESH FRUITS.

The market for most kinds of fresh fruits continued on much the same lines as during preceding week. Canners were running on the leading varieties, Peaches, Plums and Pears. Choice Peaches brought improved rates, with \$25 a quotable figure for choice Freestones and select Clings, which will be soon coming forward, likely to bring \$30 per ton. Sales of Plums in bulk were difficult to effect over \$15 per ton, and had to be choice to command this figure. No. 1 to choice Bartlett Pears were in light stock. Strictly No. 1 Bartletts were quotable at \$20 per ton, and fancy would have readily commanded more money. Apple market was rather heavily stocked with common qualities, but strictly select, such as fine Gravenstein, were in very limited supply. Grapes were in increased receipt and showed improved quality, but prices inclined downward. Figs were on market only in very small quantity and demand for them was not brisk. Berries of most kinds now being received were in decreased supply and brought improved figures. Melons arrived freely and went at reduced rates; Watermelons especially were in heavy receipt.

Apples, fancy, 4-tier box.....	1 00 @ 1 25
Apples, good to choice, lb 50-lb box.....	60 @ 90
Apples, common to fair, lb 50-lb box.....	25 @ 50
Apples, Crab, lb box.....	25 @ 75
Blackberries, lb chest.....	3 50 @ 5 00
Cantaloupes, lb crate.....	1 00 @ 1 75
Figs, lb 1-layer box.....	40 @ 60
Figs, lb 2-layer box.....	75 @ 1 00
Grapes, Tokay, lb box.....	75 @ 1 00
Grapes, Seedless Sultana, lb crate.....	60 @ 75
Grapes, Fontainebleau, lb crate.....	35 @ 50
Grapes, Rose of Peru, lb box.....	60 @ 1 00
Grapes, Black Hamburg, lb box.....	60 @ 1 00
Grapes, Muscat, lb box.....	50 @ 75
Raspberries, lb chest.....	7 00 @ 10 00
Logan Berries, lb chest.....	— @—
Nectarines, Red, lb box.....	50 @ 75
Nectarines, White, lb box.....	40 @ 65
Nutmeg Melons, lb crate.....	40 @ 85
Plums, ordinary varieties, lb box.....	25 @ 40
Plums, fancy, lb box.....	50 @ 65
Prunes, lb crate.....	25 @ 50
Peaches, lb box.....	25 @ 50
Peaches, wrapped, lb box.....	60 @ 75
Pears, Bartlett, lb box.....	40 @ 1 00
Pears, common kinds, lb box.....	25 @ 65
Strawberries, Longworth, lb chest.....	5 00 @ 8 00
Strawberries, Large, lb chest.....	3 00 @ 5 00
Whortleberries, lb.....	5 @ 7
Watermelons, lb 100.....	8 00 @ 15 00

## DRIED FRUITS.

The noteworthy feature of the market for cured and evaporated fruits is the brisk demand for Apricots and the higher figures current. Quotable rates are fully half a cent above those of a week ago. For choice to fancy the market is especially strong, these descriptions being difficult to secure in great quantity, even at stiffer prices than quotable. Eastern dealers are eager purchasers of Apricots, although local demand is by no means lacking. The crop is not proving as heavy as many anticipated. The Peach market is showing a better tone, with light receipts so far at this center. Canners and shippers have been buying heavily of this fruit and have been advancing their prices, in some instances fully \$5 per ton, making it evident that the crop is not as large as was predicted by many before the season opened. Probably another case of "wish being father to the thought." Nectarines are offering in moderate quantity and are commanding about same figures as Peaches, being quotable at same range. Pitted Plums have not yet arrived very freely, but with prospects of liberal stocks in the near future, the market presents a rather weak tone, quotations remaining as last noted. New Evaporated Apples are in fair supply for this early date, and are meeting with considerable inquiry on local account at steady rates, 5 1/2 c. being the current ruling figure for prime offerings from first hands. Prices for new Pears have not yet been determined, but will soon be established, and will probably range from 6@8c. for prime to fancy halves. Values for new Prunes are expected to be established the coming week; stocks of old Prunes are nearly exhausted.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	6 @—
Apricots, Royal, choice, in sacks, lb.....	7 @ 7 1/2
Apricots, Royal, fancy.....	8 1/2 @ 9
Apricots, Moorpark.....	10 @—
Apples, in 50-lb boxes, rings, pressed, fancy.....	5 1/2 @ 5 1/2
Apples, 50-lb boxes, rings, pressed, good to choice.....	4 @ 4 1/2

Figs, White, fancy pressed.....	5 1/2 @ 8 1/2
Nectarines, lb.....	5 @ 5 1/2
Peaches, unpeeled, fancy.....	6 1/2 @ 7 1/2
Peaches, unpeeled, choice.....	5 @ 5 1/2
Peaches, peeled, in boxes.....	12 @ 15
Pears, unpeeled Bartletts, halved, fancy.....	— @—
Pears, halved, unpeeled Bartletts.....	— @—
Pears, quartered, unpeeled Bartletts.....	— @—
Plums, Black, pitted.....	5 1/2 @ 6
Plums, White and Red.....	6 1/2 @—
Prunes, in sacks, 40—50s.....	4 1/2 @ 4 1/2
50—60s.....	— @—
60—70s.....	— @—
70—80s.....	— @—

Prunes in boxes, 1/20 higher for 25-lb boxes, 1/4c higher for 50-lb boxes.

Prunes, Silver.....	4 1/2 @ 6
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## COMMON SUN-DRIED.

Apples, sliced.....	3 @ 3 1/2
Apples, quartered.....	3 1/2 @ 4 1/2
Figs, Black.....	2 @ 3
Figs, White.....	3 @ 3 1/2
Peaches, unpeeled.....	4 @ 4 1/2

Recent advices by mail from New York furnish the following review of the dried fruit market in the East:

The light holdings of evaporated apples are mostly in cold storage and they are working out slowly in a jobbing way. On that class of business about former rates are obtained, but there is an undertone of weakness, and to move round lots it would necessitate quite a sharp cut in prices. Some of the interior makers have been offering prime new fruit, October and November delivery, at 4 1/2c., and several carloads are reported sold at that, with more to be had at the price. Others have felt that the situation did not warrant this and they have refused to sell. The future of the market will not be certain until the extent of production can be more definitely estimated. A heavy crop is conceded the world over, but it is a question whether many evaporators will run if prices are likely to rule so low. Sun-dried apples in very small supply and but little doing in them. Chops remain dull. Cores and skins steady, with a moderate inquiry. We understand that some Georgia peaches are being dried. Dealers are encouraging this to some extent. Raspberries are firm, with further sales of choice old evaporated at 15c. The new crop has been shortened by dry weather, and better prices are likely to rule than seemed probable two weeks ago. Samples of new sun-dried are here from the South. A few new Virginia cherries reported sold at about 9c., and a small lot of new blackberries brought 5 1/2c. New huckleberries beginning to arrive and held at 12c. Several cars of California apricots in this week, part of which went to Europe. Buyers are taking hold rather slowly at 8 1/2@8 3/4c. for Royals. No peaches arriving. Prunes are having a steady demand, with the bulk of the business in 40s at 5 1/4@6c., jobbing sales of fancy quality at 6 1/2c.

Apricots, Cal., new, lb.....	8 1/2 @ 8 3/4
Peaches, Cal., unpeeled, in bxs, lb.....	7 @ 8
Peaches, Cal., unpeeled, in bags, lb.....	6 @ 7 1/2
Prunes, Cal., lb.....	4 1/2 @ 6 1/2

## RAISINS.

There is a moderate movement in old crop Raisins, mainly in a very small jobbing way, and at slightly lower figures than official rates lately current. Prospects are that the new pack will be comparatively light and will not prove of unwieldy proportions.

## CITRUS FRUITS.

Lemons are in a little better supply and market is slightly easier than preceding week, but the quotable range of values remains about the same. Limes are steadily held, with stocks only moderate and in few hands. Oranges are not in sufficient supply to warrant quoting.

Oranges—Navels, fancy lb box.....	— @—
Navels, good to choice.....	— @—
Navels, common to fair.....	— @—
Valencias.....	1 50 @ 3 00
St. Michaels.....	1 50 @ 2 75
Mediterranean Sweet.....	1 50 @ 2 50
California Seedlings.....	— @—
Lemons—California, select, lb box.....	4 00 @ 4 50
California, good to choice.....	3 00 @ 3 50
California, common to fair.....	1 50 @ 2 50
Limes—Mexican, lb box.....	6 00 @ 7 00
California, small box.....	— @—

## NUTS.

The Almond market is in healthy shape, being strong at the quotations. Especially is there a good demand for Shelled Almonds. Prospects are that choice Walnuts will rule firmer than recently anticipated. A portion of the crop has been seriously damaged by recent excessively hot weather, and some injury from insect pest is also reported.

California Almonds, shelled.....	22 1/2 @ 25
California Almonds, paper shell, lb.....	12 1/2 @ 13 1/2
California Almonds, soft shell.....	10 @ 11
California Almonds, hard shell.....	6 @ 7
Walnuts, White, soft shell.....	10 @ 11
Walnuts, White, California, standard.....	8 @ 9
Chestnuts, California Italian.....	— @—
Peanuts, California, fair to prime.....	5 @ 6
Peanuts, Eastern, hand-picked.....	6 @ 6 1/2
Pine Nuts.....	6 @ 6

## WINE.

The market is exceedingly quiet, with every prospect of so continuing until this year's product begins to come for-

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ward. There is very little wine now being offered or held by producers. Market for dry wines of 1899 remains quotable at 14@16c per gallon wholesale, and 17@20c in a small way for choice stock or favorite marks. That wine grapes will rule comparatively high the coming fall seems established beyond question, but whether this year's wine will bring correspondingly good figures remains to be determined.

## California Dried Fruit at New York.

NEW YORK, Aug. 8.—Evaporated apples, common, 3 1/2@4 1/2c; prime wire tray, 4 1/2@5 1/4c; choice, 5 1/2@6c; fancy, 6 1/2@7 1/4c.

California dried fruits.—Business doing is mostly in apricots and peaches.

Prunes, 3 1/2@7c.

Apricots, Royal, 11@14c; Moorpark, 15@17c.

Peaches, unpeeled, 6@9c; peeled, 14@18c.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, 1/2 sacks.....	61,803	565,383
Wheat, centals.....	157,879	664,418
Barley, centals.....	121,333	353,109
Oats, centals.....	30,420	86,958
Corn, centals.....	875	4,317
Rye, centals.....	325	4,120
Beans, sacks.....	3,489	14,032
Potatoes, sacks.....	24,409	117,867
Onions, sacks.....	4,970	16,009
Hay, tons.....	5,572	22,459
Wool, bales.....	362	2,830
Hops, bales.....	70	101

## EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, 1/2 sacks.....	38,912	314,676
Wheat, centals.....	147,372	650,502
Barley, centals.....	61,510	64,275
Oats, centals.....	...	10,960
Corn, centals.....	...	1,527
Beans, sacks.....	140	2,395
Hay, bales.....	...	165
Wool, pounds.....	73,531	233,621
Hops, pounds.....	230	7,103
Honey, cases.....	2	90
Potatoes, packages.....	292	1,615



## THE POULTRY YARD.

### Experimental Results With Poultry.

A year ago we gave in the PACIFIC RURAL PRESS an account of the results of two seasons' experiments with poultry at the Utah Experiment Station. The station has completed its third year's experiments to determine stated facts, and the results should therefore be taken as broadly representative. We know of no experimental work with poultry so systematically and diligently pursued as that at the Utah station, and much credit is due the institution for its persistence in well doing, as well as its enterprise in its inception.

We have just received the account by Mr. James Dryden, poultry manager of the station, reviewing the results of the three seasons' work. The fowls were naturally of different breeds and different ages, and included in all twenty pens, suitably housed and yarded. The following is Mr. Dryden's summary:

First.—What is the most profitable age of the hen? Two pens of Leghorns averaged 175 eggs per fowl during the first year. During the second year the same fowls averaged 132½ and during the third 116½ eggs per fowl. The per cent profit on food was 188 the first year, 118 the second and 97½ the third. A test with two other pens of Leghorns gave the following results: First year, number of eggs laid, 159; second year, 119½; per cent profit on food, first year, 184; second year, 99.

Second.—What is the effect of exercise on egg production? The results for three years are in favor of feeding grain in a box against feeding it in straw and making the hens scratch it out. One pen with all grain fed in a box averaged 147½ eggs per fowl per year for three years. A like pen having the grain fed in a litter of straw averaged 132 eggs. During the first year, as pullets, the results were in favor of the exercise, the pen fed in a box averaging 158 eggs per fowl, against 182 for the pen fed in the straw. These results were secured with Leghorns. With two other pens of Leghorns, during the first year as pullets, the pen with "exercise" laid 160 eggs and the pen with "no exercise" 157 eggs. During the second year the "exercised" pen laid 119 and the "no exercise" 120 eggs, the results for the two years being practically the same for those two pens.

Third.—As to the effect of exercise on food consumption, the average of pens 3 and 4 for three years shows that the pen with "exercise" consumed 62.4 cents worth of food, and the pen "without exercise" 60.8 cents. In the case of two other pens the average was 63.5 cents and 62 cents, respectively, per fowl in favor of "no exercise."

Fourth.—During the year the Leghorns consumed an average of 62 cents worth of food per fowl. The Wyandottes consumed 81.6 cents per fowl, and two pens of Plymouth Rocks averaged 87.7 cents per fowl.

Fifth.—The Leghorns consumed during the year an average of about 75 pounds of total food, or about 55 pounds of dry matter per fowl; the Wyandottes, 100 pounds total food, 73 pounds dry matter; the Plymouth Rocks, about 110 pounds total food and about 80 pounds dry matter.

Sixth.—The three years' results from Leghorn pullets show an average of 162 eggs per fowl per year at a food cost of 4.6 cents per dozen. These results are not from selected or "pedigree" layers.

Seventh.—The record of weights of fowls shows that Leghorns weigh about 10% more during their second year than during the first year as pullets. During the third year there is practically no increase in weight.

Eighth.—The largest egg production was during the period of greatest food consumption. The smallest egg yield was when the food consumption was least. The hens attained their greatest weight immediately preceding the period of greatest egg production. After the periods of heavy laying they showed a loss in weight.

Ninth.—Five pens of Leghorns two and three years old laid eggs averaging 1.56 pounds per dozen. Five pens of Leghorn pullets laid eggs averaging 1.37 pounds per dozen. The eggs from the pen of Wyandotte pullets averaged 1.56 pounds per dozen, and those laid by four pens of Plymouth Rock pullets averaged 1.52 pounds per dozen.

Tenth.—Eggs from different hens of the same breed varied in weight. One pen of Leghorns two years old laid eggs averaging 1.45 pounds per dozen. Two other pens of the same age, but of a different strain, laid eggs averaging 1.63 pounds per dozen. The eggs from the latter two pens weighed more than those of the Plymouth Rock or Wyandotte pullets.

Eleventh.—The eggs from five pens of Leghorn pullets averaged 1.44 pounds per dozen. The eggs from the same pens during the second year averaged 1.54 pounds per dozen. In other words, the size of the eggs was 8% greater the second year than the first.

Twelfth.—A test of wheat versus corn gave results in favor of wheat for egg production.

Thirteenth.—In the case of Leghorn pullets, the

addition of dried blood to the ration considerably increased the egg yield. With Plymouth Rock pullets no effect was noticed on the yearly record. With both, the pens having dried blood began laying earlier than the others.

Fourteenth.—The discarding of corn (except the little used in the mash) and substituting a small quantity of sunflower seed, did not materially affect the egg yield, there being but a slight increase. Owing to the greater cost of the sunflower seed, the financial results were in favor of the corn.

Fifteenth.—The results of a test with Leghorn pullets showed that a nutritive ratio of 1:4.95 was very much superior to one of 1:6.66. With Plymouth Rocks the results were inconclusive.

Sixteenth.—An initial test with one cockerel and one capon gave no indication of increased growth from the operation of caponizing; but the appearance of the dressed bird and the quality of the meat showed a decided advantage from the operation.

## MISCELLANEOUS.

### Cable Line to the Philippines.

Being in the Philippines to stay, and owning the Hawaiian Islands, the United States naturally needs telegraphic communication. Cable lines across the Pacific are being discussed. Advocates of a government line are figuring on two routes. The southern, by way of Honolulu from San Francisco to Manila and Guam, would, it is calculated, cost about as follows:

9285 knots cable, including 10% slack.....	\$11,583,030
500 knots spare cable.....	623,750
Two cable ships (\$200,000 each).....	600,000
Two sets cable gear.....	250,000
Six stations.....	180,000
Duplex instruments, battery, etc.....	60,000
Spare instruments.....	30,000
Traveling expenses, freight, etc.....	100,000
Contingent fund.....	250,000
Duplicate cable.....	11,583,030

Total.....\$25,259,810

### ANNUAL EXPENSE.

Interest at 3% on \$25,259,810.....	\$ 750,794
Maintenance and coal supply of two ships.....	250,000
Operating and traveling expenses.....	175,000
Repair and renewal fund.....	400,000

Total.....\$ 1,582,794

It is thought that the northern route by way of Alaska to the Philippines, and in addition thereto a separate line from California to Hawaii, could be laid for about \$12,000,000, as indicated in the following table:

Route.	SINGLE. Miles.	Cost.	DUPLICATED. Miles.	Cost.
International cable, U. S. to Asia.....	4,883	\$4,000,000	8,876	\$6,000,000
Same, with cable to Hawaii.....	7,283	6,500,000	12,276	9,200,000
American, northern, to Philippines via Alaska, with branches to Japan and separate cable to Hawaii.....	9,335	9,000,000	12,735	12,000,000
American, southern, via Hawaii and Guam.....	7,750	13,500,000	14,250	25,000,000

This difference in cost is largely due to difference in length of the links. The arguments against such a route are to be found in the great natural difficulties to be encountered—ice, fog and great depths, but a cable on the northern route could be repaired at any time of the year on any link, except during temporary storms, and the cable ship could always find a harbor within 100 miles of any break. By the northern route the different stretches vary but slightly in distance, and are all comparatively short, none exceeding 850 miles, so that, in case of a break, one cable ship, if it were found impossible to make repairs, could easily relay one entire stretch, the cost of which would not amount to more than \$600,000.

On the southern route, with its four great stretches of 2286, 1254, 2593 and 1496 miles, the cost of a break in great depth, in case repair were possible, would probably amount to several hundred thousand dollars, with the likelihood also of a necessity for the renewal of an entire stretch, which would cost from \$2,000,000 to \$3,000,000.

Another consideration is the supply of gutta percha, which has become so scarce and its price consequently so high that its use in construction of long distance cables has become very costly. Gutta percha costs \$2 a pound; rubber can be had at \$1.30. For long stretches of 2000 miles or more gutta percha, however, is requisite as insulating material, while for shorter stretches india rubber suffices.

The question of Pacific cable communication will be one of the foremost ones concerning the United States in the first years of the twentieth century.

### An Old Bell.

In the office of C. T. Brown, of the Buckeye M. Co., with office at Socorro, is found what is alleged to be the oldest bell in the United States. This historic bell was made in 1549. In 1680 the church was destroyed by the Indians. In 1734 the bell was dug out of the ruins of an old church at Gran Quivera, an old pueblo and Spanish city, said by several Spanish historians to have exceeded 20,000 in population. From Gran Quivera the bell was brought back to Socorro and hung in the old San Miguel church.

In 1781 this church at Socorro was destroyed by Indians and the people driven south to Isleta, near El Paso. In 1806 a colony of seventy families came from Belen, on the Rio Grande, and resettled Socorro and repaired the old church, which stands to this day. This old bell was again resurrected and placed in the church. The bell weighs 461 pounds. The metal used in it came from a mine in Grant county, called the Santa Rita de Copie. The women added all their jewelry of silver and gold to it. Chippings from the old bell have been assayed and it is found that it is worth over \$400 in gold and silver.

This bell was the first to ring on the American continent, and that on the banks of the Rio Grande. Seventy years before the Mayflower sailed into Boston harbor this old bell, with its clear tone, was calling together a brave little band of worshipers with their weapons of defense in one hand and the cross in the other.—New Mexican.

Of the substances familiar to everybody, some occur, under ordinary conditions, in the three states of gas, liquid and solid. Water, for example, under the usual pressure of the atmosphere, passes into steam at 100° C., or 212° F., and freezes at 0° C., or 32° F. If the pressure is increased, the boiling point rises, and if the pressure is lowered the boiling point falls accordingly. The pressure and the temperature must both be taken into account. If the temperature is kept high, as in a steam boiler, a greater pressure must be exerted to maintain the water in a liquid state, and if the ordinary temperature were, on the average, 400° C. higher than it is, water would be known to us only as a gas. That is, steam at a temperature above 358° C., or about 759° F., cannot be changed to liquid by any pressure, however great. A similar state of affairs exists for every substance. That is, there is for every substance some point of temperature above which it cannot become liquid, and this point is called the critical temperature. Any gas will be easy or difficult to liquefy, according as its critical temperature is high or low. Oxygen, whose critical temperature is 118° below zero, resisted all efforts at liquefaction for many years; nitrogen, with a critical temperature of -146° C., was still more refractory, and hydrogen, whose critical temperature has not been exactly determined, had to be cooled to about 235°, or more, below the zero of the Centigrade scale before it yielded.

THE theoretical velocity with which water flows under a given head is 8.03 times the square root of the head. To find the pressure in pounds per square inch of a column of water, multiply the height of the column in feet by .434, approximately; consider that every foot elevation is equal to ½ pound pressure per square inch; this allows for ordinary friction. To find diameter of pump cylinder to move a given quantity of water per minute (100 feet of piston being the standard of speed), divide number of gallons by 4; square root of quotient will be diameter (in inches) of the pump cylinder. To find quantity of water elevated in one minute, running at 100 feet of piston speed per minute, square diameter of the water cylinder in inches and multiply by 4. To find the theoretical horse power necessary to elevate water to a given height, multiply total weight of the water in pounds by the height in feet; divide the product by 33,000; (an allowance of 25% should be added for water friction, and a further allowance of 25% for loss in steam cylinder.)

THERE are three theories as to the origin of petroleum—that it is of animal, vegetable and mineral origin, the adherents of each theory adducing what they consider proofs. Opponents of the animal origin theory have claimed that, if so, nitrogen compounds would be found therein; and now that asphalt from near the Red Sea has yielded 2% nitrogen, advocates of the animal origin theory feel more positive than ever. Meanwhile those who may uphold the combined vegetable and mineral origin of the oil may be considered nearest the truth.

ONE BARREL unslaked lime weighing 220 pounds will make 2½ barrels stiff lime paste, equal to 0.3 cubic yard. One barrel of lime paste and three barrels of sand will make three barrels of mortar, equal to 0.4 cubic yard. One barrel of unslaked lime will make 6.75 barrels mortar one part lime, three parts sand. Cement weighs 400 pounds gross per barrel, 375 pounds net. One cubic foot dry cement shaken down weighs 100 pounds and makes 0.63 cubic foot stiff paste, when mixed with 25% to 30% water.

SILVER, in the form of coin, is at a premium at Cape Nome, Alaska, by reason of its scarcity, a \$20 gold piece being exchangeable for only \$18 in silver.

IT is not unusual to work a continuous telegraphic circuit of 6000 miles for hours at a time by the Associated Press in sending daily press report.



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**FRUIT PRESERVATION.****How Apricots Are Cured.**

Cured apricots are a favorite fruit. Properly prepared, they make a sauce that can hardly be distinguished from fresh fruit, and are a splendid material for pie.

The fruit is permitted to become fully colored and as ripe as possible without losing shape, there being a steady increase in weight up to this point.

They are assorted as to sizes to make uniform drying. They are cleanly cut and the pit removed, then the halves, flat side up, spread on trays directly from the hand of the cutter. A carload of trays is run into the sulphur house and exposed to the fumes of burning sulphur long enough to thoroughly sterilize the fruit, set the color, and prevent the attack of insects. This time varies from one to two hours, depending on the condition of the fruit and the amount of sulphur burned. Thus treated, no fermentation or decay sets in, and by the time the smell of the sulphur has all escaped into the air the fruit, being placed in the hot sun, is cured enough to keep, clean and uniform in a golden yellow color.

Before becoming bone dry the fruit is stacked up on the trays and allowed to slowly cure in the shade for a while. It is then removed from the trays and piled in the fruit house for the so-called sweating process, which is no more nor less than permitting the driest pieces to absorb a little moisture from the others, which in turn become dryer, and the whole mass soon comes to a uniform condition.

The fruit when thoroughly equalized and cured in the pile is run through the grader, which sorts out the different sizes. All through these operations any discolored pieces—and they are very rare—are thrown into a box by themselves to make a uniform grade.

In packing, the bottom of the box is removed and one or two layers of fruit carefully placed by hand on what is to be the top of the box and the balance thrown in promiscuously until the required weight is in, when the box is placed under a press and settled down until the cover will go on easily. The boxes are sometimes lined with papers, lead paper at the top to make the fruit attractive when the box is opened.

The apricot has a very clean acid, not very strong, and is regarded as being one of the most healthful fruits that is produced. To prepare cured apricots, soak in lukewarm or even cold water until swollen out, and then cook with gentle heat, just coming to boiling heat without vigorous boiling. Sweeten to taste. Apricots may be eaten one or two days in the week the year round. Do not follow too many days in succession, for it is very rich, and one will become tired of it. Prunes will come nicely in between, and the taste for both never cloyed.—Tree and Vine.

**Government Whitewash.**

The United States government uses the following wash for its outdoor property, such as certain parts of forts and lighthouses. It is, of course, equally good for farm buildings and fences:

Slake half a bushel of quicklime with boiling water, keeping it covered during the process. Strain it and add a peck of salt, dissolved in warm water, three pounds of ground rice, put into boiling water and boiled to a thin paste, half a pound of powdered Spanish whiting and a pound of clean glue, dissolved in warm water; mix these together and let the mixture stand for several days. Keep the wash thus prepared

in a kettle or portable furnace, and put it on with either painters' or white-wash brushes.

**Plucky Kansas Children.**

A remarkable story comes to us of a year's work done by two Kansas children. Notwithstanding the fact that he is an invalid, T. J. Duncan rented 190 acres of wheat ground last fall, and his children, a girl sixteen years of age and a boy fourteen years old, plowed the ground with riding plows, the girl harrowed it and the boy followed with the drill, states the Beloit Gazette. A man was hired to run the harvester, the children doing most of the balance of the work. The threshing was completed recently, and the 190 acres yielded 4000 bushels of 61-pound wheat.

**The Whole Story in one letter about****Pain-Killer**

(PERRY DAVIS')

From Capt. F. Loye, Police Station No. 5, Montreal:—"We frequently use PERRY DAVIS' PAIN-KILLER for pains in the stomach, rheumatism, stiffness, frost bites, chilblains, cramps, and all afflictions which befall men in our position. I have no hesitation in saying that PAIN-KILLER is the best remedy to have near at hand."

Used Internally and Externally.

Two Sizes, 25c. and 50c. bottles.

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In Subdivisions.

This famous and world known farm is now being surveyed and subdivided. It is offered for sale in any sized government subdivisions at remarkably low prices, in no case exceeding what it is assessed for, for taxation purposes. It is also offered for rent in different sized subdivisions. A good deal was summer-fallowed the past spring, and plowing will be sold to tenants on reasonable terms.

This property will be ready for sale and rent after July 15th, 1900.  
The closest personal inspection of the land by proposed purchasers and tenants is invited.

For further particulars, address

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Capacity.	Price.
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No. 2 Safety Hand, 500 "	150
No. 6 Tubular Hand, 675 "	175
No. 9 Tubular Hand, 875 "	225
Steam Turbine, 325 "	125
Steam Turbine, 600 "	200

Send for New Catalogue No. 31

**P. M. SHARPLES,**  
West Chester, Pa.**THE SHARPLES CO.,**  
28 So. Canal St. Chicago, Ill.**FRUIT MARKETING.****A Proposition for Almond Growers.**

TO THE EDITOR:—Knowing that you are interested in any movement which may be of practical benefit to the tiller of the soil, I desire briefly to call the attention of the almond growers of our State to a few facts concerning the disposal of their product.

At best the almond tree is an uncertain producer. Foremost, of course, among the difficulties which it encounters is the early frost that nearly every season blasts the growers' hopes in some locality—frequently in all portions of the State. Added to this is a persistent habit, when the frost does not injure, on the part of some varieties, of dropping the nut after it is fairly well started on its journey to maturity. These two evils alone combine to make a small yield from a comparatively large acreage of trees.

But, notwithstanding the fact that our product foots up less than 300 carloads in an average year, there has seemed to be no disposition on the part of the growers to follow in the footsteps of the walnut and cured-fruit growers, who have done so much for themselves by associating together for their mutual benefit. When I say this, I apply it to the growers generally throughout the State; for, in our locality—one of the large almond-producing districts—much has been done to benefit every grower in the State, though all may not fully appreciate that fact.

In the spring of 1897 our growers organized under the name of "The Davisville Almond Growers' Association," and sold their crop to the highest bidder, realizing prices considerably in advance of those which had been obtained previously in private sales. The year 1898 being a barren one, so far as almonds go, the next sale along the same lines took place in July of last year, in which eight firms took part. Up to the date of our sale, the highest prices paid for the Hatch varieties had not averaged more than 9 cents. Our sale realized an average of nearly 10 cents, and prices went up to our figure. Two weeks later the Contra Costa Association at Brentwood, which had been organized with the assistance of our association, sold at an advance of about 3 cent over our prices, and again general prices advanced to the association prices.

This season, up to July 14th—the close of our sale—not an almond had been bought by the trade at prices to exceed 10½ cents for Nonpareils, and many crops of the Hatch varieties had been bought for 9 cents. On that day eleven firms, including three Eastern houses, bid for our product, and we realized for Hatch varieties: Nonpareil, 12½ cents; Ne Plus Ultra, 11½ cents; I X L, 11½ cents. On the 23rd—two weeks later—at Brentwood, the

Hatch varieties sold for 13 cents straight through.

After each of the association sales, buyers, who had earlier in the season insisted that prices on Nonpareils could not go above 10½ cents, immediately advanced their prices to those realized at the Davisville sale, and later to those obtained at Brentwood—that is, they did so in localities where the growers were posted on the results of the association sales. On the very day of the Brentwood sale, I met a grower from an isolated district who had closed a deal for upwards of twenty tons with one of our unsuccessful bidders for about 10 cents for Hatch varieties.

Thus it is seen that, although we have by association benefited ourselves in the way of prices, we have also been the cause of enhancing the prices realized generally throughout the State. What we have been instrumental in doing for our brother growers ought to spur them on to doing something for themselves. There ought to be an association in every almond district in the State. A central organization could, in that event, take steps toward collecting data from which crop and market conditions, both domestic and foreign, might be thoroughly understood.

The object of all this should be, not to fight the buyers, but to put the growers in a position to meet them on an intelligent basis. Our association has established a brand, has a system of inspection, and aims to put its product on the market, uniformly cured and bleached, in car lots. In this way we are an aid to the buyer, while aiding ourselves. Intelligent, honest, business-like concert of action among the growers is always to the interest of fair, honest buyers. But no buyer is apt to offer all the market will afford unless he finds the grower posted.

During the coming winter our association will be incorporated and will correspond with growers in the different almond districts, with the view of carrying out the above suggestions.

Our association has been a success in a small way. It seems to me that association all over the State ought to be a success in a large way, and I hope that every almond grower who reads these lines will go to work upon the proposition forthwith. J. E. LA RUE,  
Pres. Davisville A. G. Ass'n.

**Raisin Growers' Presidency.**

FRESNO, Aug. 6.—A mass meeting of raisin growers who are members of the Association will be called for the end of this month to fill the vacancy caused by the retirement of Theodore Kearney, who is now in Germany. The directors are uncertain whether Kearney is a candidate for re-election or not, but legal opinion is to the effect that he holds office as president until his resignation has been accepted by a majority of all the members of the Association eligible to vote.

**More Prune Contracts.**

SAN JOSE Mercury, : Contracts with growers in all portions of the State and county are constantly coming in. The percentage of acreage secured has very largely increased in the last few weeks. During last week a number of contracts, some of them with large growers, have come in.

**How's This?**

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Toledo, O.  
We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by him.

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Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Testimonials sent free. Price 75c. per bottle. Sold by all Druggists.  
Hall's Family Pills are the best.

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COE'S ECZEMA CURE \$1 at druggists. 25c size of us. Coe Chem. Co., Cleveland, O.

**Patrons of Husbandry.****The Grange and the Fruits.**

TO THE EDITOR:—Some Granger asks, "Why was the orchard created two days before the fishes and birds and three days before the cattle?" and then answers the question in this way: "Among other things, to impress the world with a lesson—it is too stupid to learn—that fruit diet is healthier than meat diet, and that the former should precede the latter." I wonder not that the ancient Romans, ignorant of our God, adored Pomona, the Goddess of Fruits, and that all the sylvan deities were said to worship her, and that groves were set apart as her temples. Have you not thanked God for bread many times? Have you thanked him for the fruits which he made the first course in the menu of the world's great table? The acids of these fruits, to keep the same from being insipid and their sweets from being too sour?

Let there be more fruits, flowers and grains used in our installation ceremonies.

Make your Grange halls cheerful, pleasant and attractive.

G. W. WORTHEN.

**At San Jose Grange.**

At the meeting last Saturday State Master Worthen gave an account of a recent visit to the Morgan Hill Grange. The membership and interest are constantly growing and it is predicted that there will soon be 100 members on the roll. The attendance is good at every meeting.

The State Grange will hold sessions at Los Gatos beginning October 3rd. Delegates from all parts of the State will attend, and many important questions of public interest will be discussed and acted upon.

Next Saturday several candidates will be initiated in the San Jose Grange.

A VINEYARDIST AND WINE MAKER, WHO thoroughly understands the business in all its branches, with experience in managing large cellars and large force of men, wants situation. Best references. Address L., 1607 California St., S. F.

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Come and see the crops growing on the Rancho Santa Clara del Norte. Now is the time. A large ditch runs through the property, guaranteeing ample water rights to irrigate every acre of land.

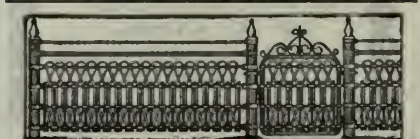
Farmers and orchardists seeking good productive land for all kinds of crops—Beans, Beets, Alfalfa, Corn, Barley, Walnuts, Apricots and Lemons—will do well to look into this proposition before investing elsewhere.

The climatic conditions are as near perfect as possible.

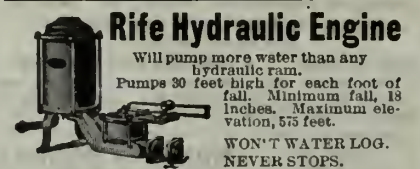
For full information, apply to GEO. C. POWER, Agent. Office—Palace Building, 152 Main St., Ventura, California.

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Will pump more water than any hydraulic ram.  
Pumps 30 feet high for each foot of fall. Minimum fall, 18 inches. Maximum elevation, 575 feet.  
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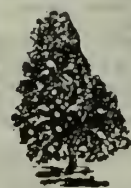
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**THE RAISIN INDUSTRY.**

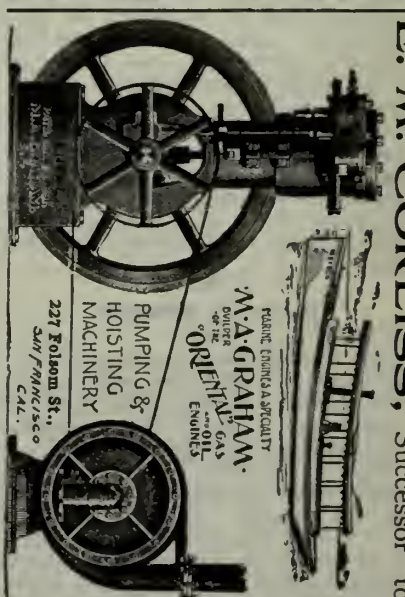
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## List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
PIONEER PATENT SOLICITORS  
FOR PACIFIC COAST.

FOR THE WEEK ENDING JULY 24, 1900.

- 654,562.—DOOR STOP—J. R. Bowler, Sr., Santa Ana, Cal.  
654,135.—RAISIN CLEANER—C. J. Clarke, Kingsburg, Cal.  
654,521.—WAVE MOTOR—E. P. Conture, Gualala, Cal.  
654,525.—SEED DRILLS—Dorsey & Mathews, Los Angeles, Cal.  
654,526.—LIQUID MIXER—E. T. Downing, Napa, Cal.  
654,579.—DOOR BOLT—A. Ericson, S. F.  
654,346.—VISION ADJUSTER—F. H. Graham, San Jose, Cal.  
654,248.—PAPER CUTTING MACHINE—F. Hager, Portland, Or.  
654,250.—FURNACE—A. Heberer, Alameda, Cal.  
654,399.—PRUNE GATHERER—O. S. & M. T. Hoover, Mount View, Cal.  
654,349.—AX—S. T. Johnston, Trinidad, Cal.  
654,315.—WORKING ORES—T. E. Luce, Bishop, Cal.  
654,267.—TRAVELING BAG—A. Mieden, Seattle, Wash.  
654,320.—ELECTRIC HEATER—R. R. Morison, S. F.  
654,486.—LENS POLISHER—O. Pederson, Los Angeles, Cal.  
654,487.—SWEEPING MACHINE—O. Pederson, Los Angeles, Cal.  
654,323.—PUMP—G. W. Price, S. F.  
654,327.—SWITCH—T. S. Savage, Oakland, Cal.  
654,283.—PIPE WRENCH—A. J. Sarvin, Springville, Cal.  
654,420.—ORE STAMP—D. M. & J. E. Smyth, Pasadena, Cal.  
654,333.—DUMP WAGON—P. Vasquez, Halfmoon Bay, Cal.  
654,580.—LAMP FILLER—H. H. Venable, Redondo, Cal.  
33,011.—DESIGN—W. G. Dodd, S. F.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey, Strong & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

**AUTOMATIC SWITCH.**—No. 654,327. July 24, 1900. T. S. Savage, Oakland, Cal. The object of this invention is to provide a means by which the motorman or other operator upon a car or like traveling vehicle can determine the direction in which the car should travel upon arriving at a switch where two tracks diverge from each other. At the point where the main and branch line of the track separates is a spring-pressed switch point normally closed to cause the cars to move upon one line of track. A rock shaft and arms carried thereby are provided, one of which connects with the switch point and the other with a pressure plate which projects into the path of the car wheels so as to be depressed by the weight of the passing wheels and throw the switch point away from its contact with the track. A spring acts to return this switch point after the wheels have passed the pressure plate. By means of a foot pedal upon the car, the plates are depressed so as to pass inside the switch point after it has been moved away from its contact and to thus retain it in such position while the car wheels pass upon the other line of track.

**WAGON DUMPING GEARS.**—No. 654,333. July 24, 1900. P. Vasquez, Half Moon Bay, Cal. The object of this invention is to provide a mechanism for moving the containing box or body of a wagon or similar vehicle in a longitudinal direction and tilting the same to discharge the load carried thereby. It comprises a rock bar or equivalent device carried upon a wagon body, a pinion mounted upon a journal shaft and having teeth engaging the rack and means for rotating the pinion so that by its engagement with the rack it will draw the latter and the wagon body rearwardly upon the bed until it arrives at a point where it will tilt and discharge its load. In conjunction with this are stops which engage with the shaft or roller and form a bearing about which the box tilts, and which prevent its sliding farther to the rear. Rollers are journaled upon the bed to form an anti-frictional support, upon which the box travels easily when it is moved forward or backward.

**APPARATUS FOR WORKING ORES OF VALUABLE METALS.**—No. 654,315. July 24, 1900. T. E. Leece, Bishop, Cal. This invention relates to an apparatus which is designed for working the ores of valuable metals, and is especially useful for separating slimes from solutions in which they

may occur, and also for separating heavier and lighter parts under any condition in which they may be found associated. It consists essentially of a tank having one side at a considerable inclination, and within this tank is an endless traveling belt with directing rollers so that one portion of the belt is caused to travel through the tank in close proximity with the bottom, and the other part is guided back exterior to the tank by similar rollers. The material is delivered into the deeper portion of the tank and the heavier part settles down upon the belt, which continually travels up the incline to a point of discharge exterior to the tank. Transverse partitions having flexible sweeping lower edges in contact with the inclined portion of the belt keep the slimes upon and in close proximity with the belt as they travel upward. A suitable discharge chute receives the material, and the belt is cleaned by water jets and by a revolving brush before returning beneath the tank to again enter it.

## Breeders' Directory.

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**1 AYRSHIRE BULL, 2 AYRSHIRE HEIFERS**, registered, most fashionable strains; price, \$200.00. 1 standard-bred Nutwood stallion, disposition perfect; price \$250.00. Owner going away. A. W. Canfield, Elmhurst, Cal.

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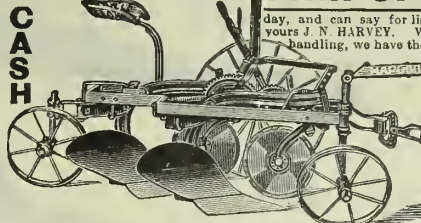
## THE LYNWOOD HERD OF SWINE

has been pretty well cleaned out of salable pigs and we have but a few young litters on hand. Our stock is now being put into show condition and we cordially invite every visitor to the State Fair to call at our pens and see the kind of stock we keep. It has always been one of the sights of the Fair and we hope to improve on former exhibits.

In answer to inquiries we will describe any stock we think will suit you.

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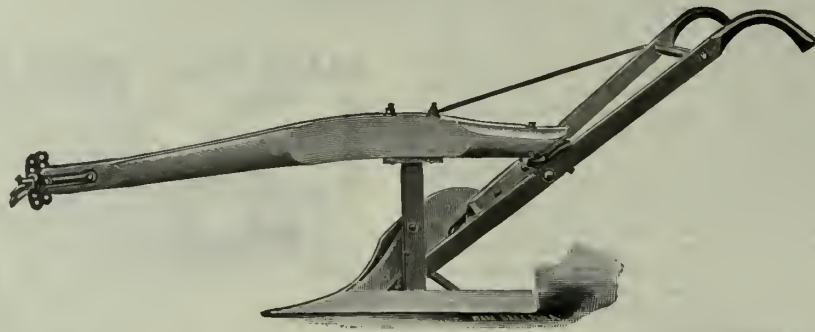
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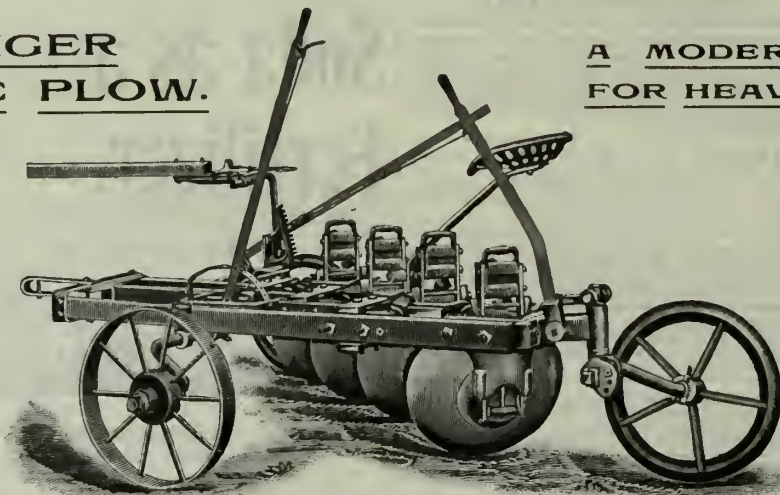
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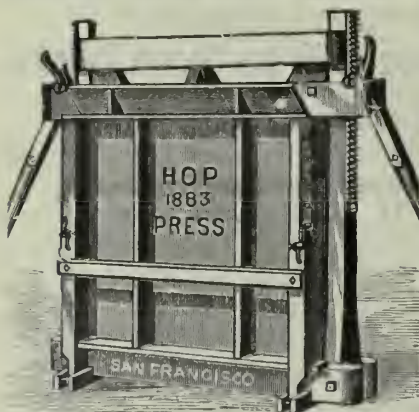
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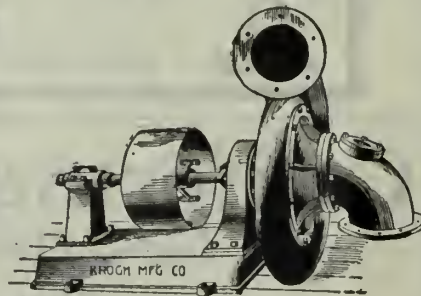
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 7.

SAN FRANCISCO, SATURDAY, AUGUST 18, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

### An Interesting Alkali Grass.

In earlier issues we have alluded to investigations by the University Experiment Station into the tolerance of alkali by various plants. Very interesting results have been secured, and it has been shown that under certain conditions the presence of the plants indicates the degree of alkalinity in the soil. In a recent University publication it is shown that several plants, whenever they occupy the ground as an abundant and luxuriant growth, indicate that the land is irreclaimable for ordinary crops, unless under-drained for the purpose of washing out surplus salts. The occurrence merely of scattered, more or less stunted individuals of these plants, while a sure indication of the presence of alkali salts, does not necessarily show that the land is irreclaimable.

One of these plants is shown in the engraving on this page. It is called tussock grass, from its manner of growth, and its botanical name is *Sporobolus airoides*, and its importance lies in the fact that, though it grows in extreme alkali soil, it is acceptable forage for stock, and its spread upon waste land is very desirable. Three samples of tussock grass soil which have been analyzed at the University show that the total amount of all salts present is in no case less than 49,000 pounds per acre, to a depth of 4 feet, and that it sometimes reaches the extraordinarily high figure of 499,000 pounds. Of these amounts, the neutral salts (glauber salt and common salt) are usually in the heaviest proportion (glauber salt, 19,600 to 323,000 pounds per acre; common salt, 3500 to 172,800); the corrosive salsoda varying from 3000 to 44,000 pounds.



Tussock Grass—*Sporobolus airoides*.

the Tulare plains, although east of the Sierra it occurs near Reno.

A VERY INTERESTING STORY comes from the horse

bought by the Eastern firms direct, but the purchases are made by the agents, who will venture no more definite answer on the subject than that these beans are highly prized by people of the Slavonic race as an article of food. The belief prevails in the bean belt that the beans are roasted by Eastern manufacturers, ground up and made into cheap brands of what is sold for coffee.

### A California Pasture Scene.

The larger engraving on this page presents a characteristic California pasture scene, from a photograph taken in December when the growth from the early rains has given the lushness of vegetation which the animals are eagerly cropping. The locality is in Contra Costa county, one of the warmer counties of the central coast region of the State, where the winter is peculiarly salubrious and winter growth early and abundant. The stock is creditable—better than much which will be commonly seen, and yet California has on the whole very good cows, thanks to the use of good-blood sires which has prevailed for decades. In years of good rains the pasture, if not overcrowded, will maintain its richness and abundance for five or six months after the date of this picture, and one could hardly tell the month from the aspect of the pasture until the month of May gives the hillside the forecast of summer colors. Contra Costa is a good county for live stock and has made good records in animal products. At present it is increasing again in stock lines in place of much grain and fruit ventures, which have not proved altogether satisfactory.



Grazing Herd in December on a Hillside Pasture in Contra Costa County.

Tussock grass, apparently, can not persist in ground which is periodically flooded. It is a prevalent alkali indicator in the hot, arid portions of the interior, from the upper San Joaquin valley, the Mojave desert, and southward; also, through southern Nevada and Utah as far east as Kansas and Nebraska. In the San Joaquin valley it is not reported farther south than

bean district of Alameda county. It is estimated that 7000 sacks or about 910,000 pounds of horse beans have been harvested this year in the district lying between Elmhurst and Haywards. Almost the entire crop has been bought up by two or three Eastern concerns, and there has been much conjecturing as to what these beans are used for. The product is never

We believe it is a good course to take, and we know no county where the effort to produce high grade stock in moderate quantity can proceed under better advantages. For horses, horned stock and swine Contra Costa has a good name already and we would like to see more of her picturesque hillsides peopled as the picture shows this one to be.



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E. J. WICKSON..... Horticultural Editor.

San Francisco, August 18, 1900.

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## The Week.

It is customary for us about this time of the year to remind our readers that there may be heavy early rains, and perishable property should be brought under shelter. It is always good advice and we can always point with pride to the value which could have been saved by acting upon our counsel. Some people never tire of tempting the elements with grain or hay or other stuff which could better be covered early, and the elements generally fall upon them. We do not desire early rains. There is still the great raisin crop to be made, the wine grapes to be gathered, the prune and a good part of other dried fruit crops to be finished. There are many other things which heavy rains would seriously damage, and we hope there will be none for two months hence. And yet the wild geese will fly and the weather prophets will talk, and the murmuring multitude is convinced that fall rains will be heavy and early. Last week's shower at Red Bluff, and something very like a shower at some coast points, gives emphasis to the popular expectation. So, we say, be ready for rain so far as possible, and we thus absolve our conscience from any guilt if there should be losses.

Wheat is assuming a stronger position. Since the data on the Eastern product which we gave on this page last week, reports come that after all the shortage in the Northwest is not to be winked at, for the crop was not so fully benefited by the July rains as was then intimated. There is, then, quite an American deficiency, and, with no great volume in other supply countries, the weight of the argument is on the side of the wheat holders. Secretary Wilson gives his testimony in favor of a considerable advance over present rates. California is showing an output much less than was expected, and there is very much grain of inferior grade, owing to the spring drouth, which following showers could not compensate for. From all points of view which we can command, we believe the market should be firm with a rising progress as the season advances.

Though this is true, the present trade in this city is not very satisfactory. Spot wheat is quiet and holds value because no one will sell, and not because many want to buy. Futures on wheat are dragging. Shipments are trivial—only one ship this week—and yet the condition is one of expectancy, and we believe has promise in it. Barley is steady for fine shipping grade and one ship has gone to Europe. Feed barley is soft, owing, it is said, to too much

screenings, which is now available for feeding purposes. Oats are firm. The United States, Germany and Japan are all said to be buying oats here, and some Eastern oats are arriving by rail to be shipped to the Orient. The overland railways should subscribe to the prosecution of the war; they are carrying everything from bombast to bombshells at quick time and full rates. Hay, too, is selling here for the transports' cargoes; and, considering the large receipts of hay, the market is kept in good shape by the new demand. Beef is firmer for first quality; mutton is steady and hogs are strong at last week's prices. They are too high now for local packers, and there seems no reason to expect speedy change. It looks like a high run for pork. Butter is firm and slightly advanced for fancy; cheese is steady and eggs unchanged for fine fresh lots, although Eastern and locally stored eggs are abundant. Choice young fowls are doing better, while old stock is dragging. Dry beans are clearing up at old prices. Potatoes are firmer with a better shipping demand, and onions during the last few days have done better. Fruit prices for large lots are steady. Dried fruit is firm, with a rush for what few apricots are still unsold. Citrus fruits are quiet. Lemons are doing better at the East than here and are being shipped direct. Almonds are high. Walnut prices are unfixed, but the outlook is good for values. Hops have sold for future delivery up to 11c. Honey is in light supply and good demand. Wool is quiet this week. Large buyers are shipping to clear the field and it is believed the present slackness is only temporary.

A COMPREHENSIVE irrigation propaganda is to begin soon, which will cover the State and lead no doubt to a better understanding of the public aspects of the irrigation issues which are being urged. It is announced that a leading speaker will be Mr. W. E. Smythe, who has been connected with irrigation development efforts for many years. Mr. Smythe has recently published a book entitled "The Conquest of Arid America," which we find to be a very interesting and careful review of the wonderful progress of agriculture by irrigation and a credit to its author. It will serve an excellent purpose in acquainting distant readers with the facts and a reminder to the Western people of the details of the work in which so many of them have carried able parts. The meetings about to be undertaken are provided for by the California Forest & Water Association. In his work at these meetings, Mr. Smythe will be accompanied by P. F. Wood of Tulare and C. S. King and P. N. Beringer of San Francisco. The campaign is to be one of education. A membership from all parts of the State, and numbering well up into the thousands, is desired, so that the importance of this movement will be discussed in every household. The first meeting will be held next week in Los Angeles, followed by meetings at Pasadena, San Diego, Redlands and several other important places in the south. Later the Sacramento valley and the San Joaquin will be visited, and the coast region and the mountainous districts will be covered in the same way.

Our columns this week contain the official announcement of the coming State Fair, concerning which we have already made frequent preliminary announcement. So far as we can judge from reports which come to us, the directors have been working with exceptional diligence this year in arranging for fine exhibits and popular attractions, and such effort commonly commands responsive behavior on the part of the people. Sacramento proposes to give the State a rousing welcome and a most delightful time, no doubt. It is still time enough for those who have good things to show to apply for the premium list and arrange for exhibition. The way of exhibitors is made easy and a full presentation of the resources and industries of the State is desired. The dairymen's convention will be held during the fair in connection with the special dairy displays which are arranged for, and this should draw many people for discussion and conference. Other specialties in the animal line will also be strongly shown and leading producers will be present. The judging will be done by professional University talent with up-to-date methods. The public also should wake up and show their appreciation of a progressive policy on the part of the directory.

We had an interesting call the other day from Dr. Von Schrenk of the Missouri Botanic Garden, St. Louis. The doctor is making an investigation of forest tree diseases on this coast under the authorization of the Division of Forestry of the Department at Washington. This is a subject in which the doctor has done much creditable work, and he is making deductions which are of direct practical value to lumbermen, not so much in the way of treatment of such diseases as in indicating the time at which trees should be cut so as to get the greatest possible value from them—or, in other words, when certain timber crops are ripe. Trees, like other organic beings, lose in value as they reach the shady side of their lives. They should be cut before this decline is reached, and often the occurrence of parasitic disease is involved in the turn in their lives. Dr. Von Schrenk is also interested in resistant roots for apple trees to circumvent the woolly aphis, and he has a number of experiments in progress in this line in the Southwest, from which important data may in due time be secured.

SPEAKING of resistant roots for the apple, recalls a conversation we had the other day with Mr. Lionel Hanlon, president of the Auckland Fruit Growers' Union, who was in California last week. Mr. Hanlon says that the Northern Spy is clearly demonstrated to be resistant to the woolly aphis, and so long as they are content to grow that apple they are all right; but there is difficulty about other varieties which they wish to grow, because the twigs and branches are so deformed by the branch form of the aphis that the trees are unfruitful and are ultimately destroyed. This is explained by the fact that they do not have in New Zealand the ladybugs which here so effectually clean out the aphis on the branches during June and July. In California, if we can have apple trees with sound roots, the ladybugs and spraying, if necessary, will protect the top. The encouragement in Mr. Hanlon's report is that the Northern Spy roots certainly are free from the insect. Nursery trees are grown by root-grafting a Northern Spy scion on a Northern Spy root piece and then budding the desired variety about 8 inches above the ground. This gives a sound root, a clean root-crown, and there is no woolly aphis except above ground, where it can be clearly seen and exterminated.

ARRANGEMENTS for the San Francisco and San Mateo Fair, at Tanforan Park, September 24th to October 6th, are progressing very satisfactorily. We have recently seen several of our leading breeders of fine stock who count upon making large exhibits, as the location of the fair, the freedom from catch-penny distractions, etc., seem to please them greatly. It is expected that the throngs at the fair will be immense, owing to proximity to the popular rural districts and the large cities of the bay region; and the systematic arrangements, great variety of industrial displays and the extra effort for expert judging, will make the fair of the highest educational value, as well as delightful in the way of clean entertainment and amusement.

W. A. TAYLOR, acting pomologist of the U. S. Department of Agriculture, sends us the list of awards at the temporary competition at the Paris Exposition on July 18th, subsequent to the list which we published last week. California again took a first award for her collection of citrus fruits. Mr. Taylor informs us that exhibits of the crop of the present year are now being forwarded at regular intervals for future competitions. The competitions yet to be held occur on the following dates: Aug. 22, Sept. 12 and 26, Oct. 10 and 24. Exhibits destined for any of these competitions must leave New York by steamer two weeks in advance of the date mentioned.

MR. LEROY ANDERSON, the new dairy instructor at the State University, arrived from the East on Friday last and has already entered upon his work. His first undertaking will be to acquaint himself with California dairying as it is, while at the same time dispensing such knowledge of advanced dairy doctrine and practice as seems pertinent. He will appear at Farmers' Institutes in the dairy districts—the first of these happening to be at Pescadero, San Mateo county, the last week in August.



## QUERIES AND REPLIES.

### Prune Rust and Red Spider.

TO THE EDITOR:—I send some French prune leaves and some bark taken off the same trees. The leaves are dropping and look brown or burned from the distance. The fruit is dropping, is spongy, not juicy, and, when dipped and spread on trays, are all "frog bellies." The soil is good and has been fairly well cultivated. I see no other orchards affected in this way. I am glad this one is not mine; but I want to know what is the matter and the remedy, if there be one. The place is near the top of the Santa Cruz mountains, in Santa Cruz county.—L. N. SABIN, Los Gatos.

This is a sorry narrative. The immediate causes of the trouble are very apparent. The leaves are attacked by prune rust, a fungus of the same general class as grain rust, which tears open the leaf tissue and robs the tree of its service. The bark is covered several tiers deep with the eggshells of the red spider, showing that for years, probably, this insect has been running riot and robbing the tree of its invigorating sap. These two enemies being actively at work, the leaves and fruit drop and the fruit does not dry properly, because it is not naturally matured and lacks the sugar which assures drying without fermentation. The remedy for prune rust is the lime, salt and sulphur wash, applied during the dormant season, to kill all spores which may be resting on the bark, and followed by Bordeaux mixture, after the leaves are out, to protect them from air-driven spores which may reach them. Prune rust must be given no advantage.

The red spider should be attacked with sulphur. If it is destroyed now, there will be a better chance for the tree to finish its season's growth and make buds for next year. We apprehend that, in addition to these pests and ministering to the ill effects of their presence, is lack of moisture in the soil. Many places on the higher slopes and ridges of the Santa Cruz mountains, in spite of their heavy rainfall, need summer irrigation to make good tree fruits. The soil can not retain enough moisture to last through the long hot and dry season. Surely, the trees can not support pests and fungi in addition to the natural stress upon them.

### Beans and Bacteria.

TO THE EDITOR:—I send you samples of bean plants from a large field which looks very promising, but which I fear is to fail because I find adhering to the rootlets so many whitish things which look like the larvæ of insects. I am afraid they will destroy the plants, especially as I find burrows in the large roots and the stems which seem as though these grubs were boring through the plants. Is there anything that can be done to save the plants from these pests? The specimens are from one of the islands on the Sacramento river.—OWNER, San Francisco.

We are very glad to assure you that apprehension of danger menacing your bean crop is unnecessary. The peculiar forms which you find upon the rootlets are not insect life in any form but they are tubercles of vegetable growth, the abodes of benign bacteria which have the power of appropriating atmospheric nitrogen and rendering it available to the uses of the bean plant. One reason why your plants look so well is found in the abundance of the forms which you distrust.

The tubular passages occurring longitudinally in the roots of the plants are not burrows of borers, though they do have much of that aspect. They are the natural central tubes of the main roots.

As to the apparent failure of the blossoms to set and the lack of pods on the specimens, it can be said that the unusual vegetative vigor which gives the areas in question their unusually fine appearance is itself at enmity with the setting of the blossom. Few plants set fruit well while growing too vigorously. As this growth is checked by increasing dryness in the soil they will set abundantly unless the bloom should be interfered with in some way. If the land is naturally moist, cultivation should be stopped (except so far as is necessary to kill weeds) so that the plants may feel a little drying of the soil. If irrigation is practiced be careful and use as little water as possible so as to maintain verdure and not induce excessive growth. One trouble with beans on the islands is the excess of conditions favoring growth, which often delay fruiting so long that proper drying of the plant and ripening of the bean are not attained before the frosts come.

### Wheat for Napa County.

TO THE EDITOR:—Is there any better wheat for the upper part of Napa county than the Small Club which has been grown here for twenty years or more almost exclusively? Is it not often desirable to change the seed and get new varieties?—READER, Monticello.

Varieties of wheat for different localities can be prescribed only upon the results of local trial. Probably the Small Club which you mention is the survivor of a number of varieties which were tried long ago. Whether there are varieties which would be better than the Small Club at the present day must be made known by introducing and growing other varieties, side by side, with it. It is often the case that great benefit is realized by a change of seed, but probably many new varieties which you might introduce on trial would fail. There is so little interest, however, in new kinds of wheat in this State that our seedsmen do little with them, but they could fill orders for collections of single sacks of the kinds which constitute our California product, and if one of them proves better than what you now grow the experiment would be very profitable. Local clubs, granges and other organizations should arrange for trials of this kind in districts. They add to the interest of the meetings and they reach local needs as no other experiments can.

### Cutting Back for Grafting.

TO THE EDITOR:—I am thinking of grafting some five-year-old apricot trees into prunes and wish to know if it would be advisable to have the trees cut back—say to within a foot or two feet of the point where it is desired to set the scion—some time previous to the grafting operation that the tree may recover from the shock. How long a time should the cutting be done before the time of grafting to be of greatest benefit to the tree?—W. D. C., Los Gatos.

We do not believe in cutting back some time before grafting. We think the tree sustains injury by cutting back too long before the growing season. We would allow the top to remain until the grafting begins, although, if there is any great advantage to be gained in getting part of the work done ahead, it can be done without apparent harm. We would, however, postpone this as long as possible, so the stumps should not stand too long before grafting.

### Prunes and Morning Glory.

TO THE EDITOR:—It may interest you to know that this year our crop of prunes is heavier and finer in size where the ground is covered with morning glory.—GROWER, Haywards.

We apprehend that this is due to the fact that the particular place where both prunes and morning glory did well, the soil had moisture enough for both and the deep-rooting trees had resources which the morning glory did not reach. If there had only been enough for one the morning glory would have pinched the prunes. We believe that the glory did not help the prunes but under the local conditions could not hurt them, and that the prunes did better here than elsewhere because they had a better place to do well. For the same reason the morning glory did better here than elsewhere.

### Cottony Cushion Scale.

TO THE EDITOR:—I find on one lemon tree in my orchard of 700 trees a scale or bug that I never saw before. I send a few leaves in a box to you. Does it amount to anything? I have black scale, but am spraying for that.—CITRUS, Ventura county.

The insect on your lemon tree is the "cottony cushion scale" (*Icerya purchasi*). It is a very destructive scale and at one time threatened to destroy the citrus interests of the State and to menace other trees and shrubs as well. Its course was quickly and effectually checked by the introduction of an Australian ladybug (*Vedalia cardinalis*) and no one fears this insect now. Your county horticultural commissioners ought to be ready to furnish you a colony of this beneficial insect to place on your tree; if not, apply for such a colony to Alexander Craw, branch office State Board of Horticulture, San Francisco.

### The Hog in California.

TO THE EDITOR:—Is there a book on swine growing and breeding in California?—READER, San Francisco.

There is no such book, and, though it would be helpful to many, no doubt, to have a systematic

statement of California conditions as related to breeding, feeding and general management and practical suggestions drawn therefrom, such a book at the present time would not pay for the printing. Too many people think they know all about "hawgs" and are content with any kind of a rooster to make a special publication profitable. The best information to be had—and it covers the ground very well—is to be found in the essays from our best breeders and feeders which appear from time to time in the PACIFIC RURAL PRESS. Those who file their papers and use the indexes have a library of up-to-date California agricultural practices always available.

## WEATHER AND CROPS.

### Report of the U. S. Weather Service for Week Ending August 13, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

#### COAST AND BAY SECTIONS.

Cool weather, with considerable cloudiness and fogs along the coast, has prevailed during the week, and conditions have been favorable for all crops. Beans were somewhat damaged by heat during the preceding week. Grub worms are doing considerable damage to peas and other vegetables in Humboldt county. Grain threshing is progressing. The yield of wheat is much below average, and the quality inferior in some sections. Oat hay is not yielding as well as expected. Pasture is good, and stock of all kinds are fat. A large crop of Bartlett pears is being gathered. Prune picking and drying are progressing; the yield in the northern counties is heavy, but the fruit is said to be small.

#### SAN JOAQUIN VALLEY.

Clear, pleasant days and cool nights have prevailed during the past week. These conditions were not very favorable for the ripening or drying of fruit. Grain harvesting is over and the yield in most sections was below the average. Most of the grain is being held in the warehouses for better prices. Fruit drying is progressing. Reports from the fruit crop are generally very encouraging. Some Tokay grapes are being marketed in the vicinity of Lodi. Almond harvest has begun; this is several days earlier than usual. Prune picking will begin in some localities next week. Egyptian corn is looking well. Sweet potatoes are maturing, and some are being marketed. There is a good second crop of figs. A large crop of hay of good quality is being stored.

#### SACRAMENTO VALLEY.

The weather has been unusually cool and pleasant during the week, the temperature having been several degrees below normal. With the exception of several heavy dews, which in some places retarded fruit drying, conditions have been favorable for all farm work. The wheat crop is nearly all harvested, and is being stored or shipped. The yield is a great disappointment, and in some sections the quality is not as good as expected. Barley is nearly average in some localities. The third crop of alfalfa has been harvested. Hops have ripened rapidly, and picking will begin during the week; the yield will be light. Grape picking is in progress; Tokays, Muscats and Rose de Perus are yielding good crops. The work of picking, canning and shipping deciduous fruits continues. Oranges and olives are looking well.

#### SOUTHERN CALIFORNIA.

The weather has been considerably cooler than during the preceding week, with cloudy or foggy nights. Conditions have been favorable for walnuts and citrus fruits. The water supply continues good in some sections, but in others the scarcity of water is being shown in the poor condition of the trees. Melons were damaged by heat during the preceding week. Corn is not turning out as well as expected. Deciduous fruits of all kinds are yielding very light crops.

EUREKA SUMMARY.—The grain yield in Humboldt county is about half of last year. In some oat fields the heads are grainless. Barley will probably be an average crop. Many acres of peas and other vegetables were destroyed by grub worms.

LOS ANGELES SUMMARY.—Last week's hot weather injured beans. Raisin grapes are ripening rapidly, and picking will begin earlier than usual.

#### Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Aug. 15, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall to Same Date Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Minimum Temperature for the Week.....	Maximum Temperature for the Week.....
Eureka.....	.00	T	.24	.13	50	62
Red Bluff.....	.00	.04	.02	.05	58	90
San Francisco.....	.00	T	.02	T	50	86
San Francisco.....	T	T	T	.04	52	66
Fresno.....	.00	T	.00	T	54	92
Independence.....	.00	.07	.07	.04	54	88
San Luis Obispo.....	.00	T	.00	.03	50	74
Los Angeles.....	.00	.00	.01	.05	56	78
San Diego.....	.00	.03	T	.03	62	78
Yuma.....	.00	.02	.06	.34	102	64

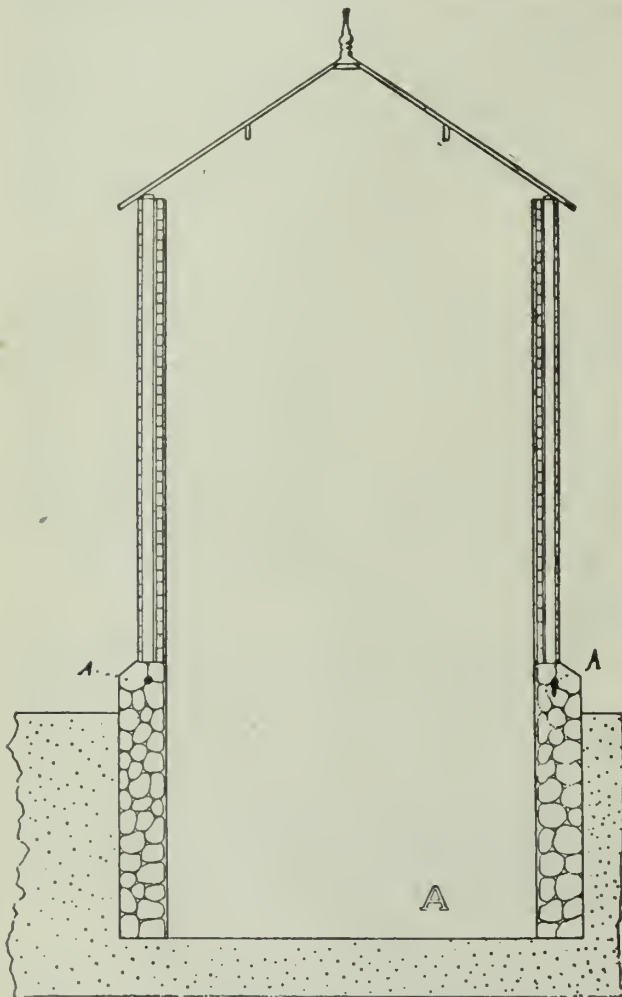


## THE STOCK YARD.

### Stone and Brick Silos.

In the PACIFIC RURAL PRESS of July 14th we gave an excellent account of the building of wooden silos from the writings of Prof. F. H. King of the Wisconsin Agricultural Experiment Station. Silos made of wood are most available in this State and probably but few will be made of other material, and yet some of our readers in parts where stone is plenty or where bricks can be cheaply burned may desire to proceed with those materials. Prof. King says that whenever stone can be had on the farm suitable for building purposes these may be used in silo construction, thus converting idle into active capital. So far as the silo itself is concerned no better or more endurable material can be used, and the stone silo will be found one of the cheapest of the thoroughly good forms. Great pains should be taken in building the walls to fill all spaces between stones solid with smaller ones and mortar and to have them thoroughly bonded in order to secure strength and prevent cracking.

The portion of the silo wall which is below ground



A brick lined round silo with bricks set on edge and plastered with cement. Dots A, A show where an iron rod may be bedded in the wall to prevent spreading.

the pit for the silo large enough so as to have plenty of room outside of the finished wall to permit the earth filled in behind to be very thoroughly tamped, so as to act as a strong backing for the wall. This is urged because a large per cent of the stone foundations of wood silos have cracked more or less from one cause or another and these cracks lead to the spoiling of silage.

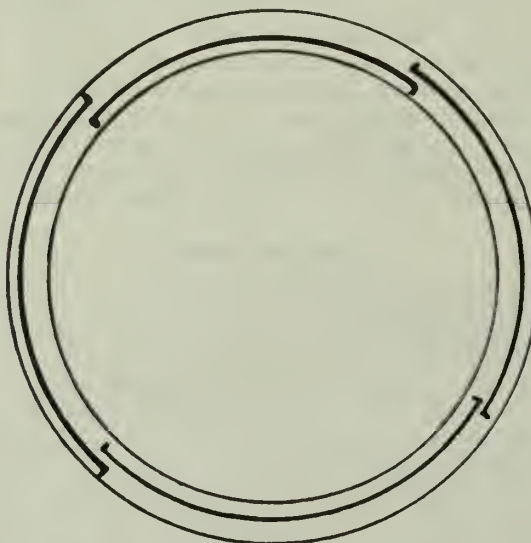
Flat quarry rock, like limestone, will make the strongest silo wall, because they bond much better than boulders do, and when built of limestone they will not need to be reinforced much with iron rods. It will be best even in this case, however, to use iron tie rods between the lower two doors.

The door jambs for the stone silo are best made of 4x4's framed together and set far enough apart to give a depth 4 inches less than the thickness of the wall. This will allow mortar to be filled in between the 4x4's to make an air-tight joint. A 6-inch board may be fitted around the outside of the inner side of the door jambs to form the rabbet for the doors. There will be slight shoulders left in the round stone silo above and below the doors when these are made flat, and these should be filled out with mortar when plastering, giving a long, gentle slope back to the wall.

The door is best made of two layers of 6-inch flooring, tongued and grooved, crossing at right angles, nailed or screwed together, with a layer of good acid and water proof paper between. To make the door fit perfectly air-tight there should be tacked to the face of the door jamb, all around, a wide strip of thick roof paper or strips of old worn out rubber belting, and the door drawn up against this with four 1/4x4-inch lag bolts provided with washers.

**BRICK AND WOOD SILO.**—Prof. King shows that good silos can be made of brick, and where brick can be had at from \$4.25 to \$7 per M, a silo which will last indefinitely can be made at moderate cost.

Next to the all-masonry silos in point of durability and efficiency must be ranked the masonry lined silos, of which there are several types, as follows: (1) Stone silos, jacketed with wood; (2) concrete lined silos; (3) brick lined silos; (4) lathed and plastered silos.



Method of bedding iron rods in stone, brick or concrete silo walls to increase the strength. The heavy lines with ends bent represent the iron rods.

better be about 2 feet thick and laid in one of the cheap brands of cement rather than lime, the cement being desirable because lime mortar becomes hard so very slowly in heavy walls, especially below ground. After the wall is 2 feet above ground good lime mortar may be used, but in this case there ought to be at least two months for the wall to season and set before filling. The upper portion of the silo wall need not be heavier than 18 inches, and if the size of stone permit of it, the outer face of the wall may be drawn in gradually to a thickness of 12 inches at the top.

The inner face of the silo wall should be plastered with a thin coat of rich cement not leaner than 1 of cement to 1 1/2 or 2 of clean sharp sand. If the mortar is not rich and troweled smooth, the acids of the silage will act upon it much more rapidly, dissolving out the lime and leaving it open and porous.

It will usually be prudent also to whitewash these linings every two or three years, especially the lower portion where the silage is longest in contact with the cement, in order to prevent softening, using cement to make the whitewash.

In deep stone silos, which rise more than 18 feet above the surface of the ground, it will be safest to strengthen the wall between the two lower doors with iron tie rods and, if such a silo is built of boulders, it will be well to use rods enough to make a complete line or hoop around the silo about 2 feet above the ground, as represented in the engraving.

Too great care cannot be taken in making the part of the wall below and near the ground solid, and especially its outer face, so that it will be strong where the greatest strain will come. It is best also to dig

Of these types the brick lined silo is likely to come into the more general use, and its construction will be described first.

Like the brick silo, this form should have a stone foundation, wherever it is practicable to obtain the material for it. Upon this will first be laid the sill made of 2x4's cut in 2-foot lengths, with the ends beveled so that they may be toe-nailed together and bedded in cement mortar upon the wall. The sill is set just far enough back from the inside of the wall so that when the brick are laid they come flush with the inside of the silo wall.

The 2x4 studding are next set up and toe-nailed to the sill. A stud is first set at each angle of the sill, plumbed and stayed from a post set in the center of the silo. After four or five of these are set and plumbed from the center these should be stayed from side to side by tacking to them a strip of half-inch sheeting bent around the outside as high up as a man can reach, taking care to get each stud plumb in this direction before staying. After the alternate studs have been set up in this manner the intervening ones may be put in place, toe-nailed to the sill and stayed to the rib holding the others in place.

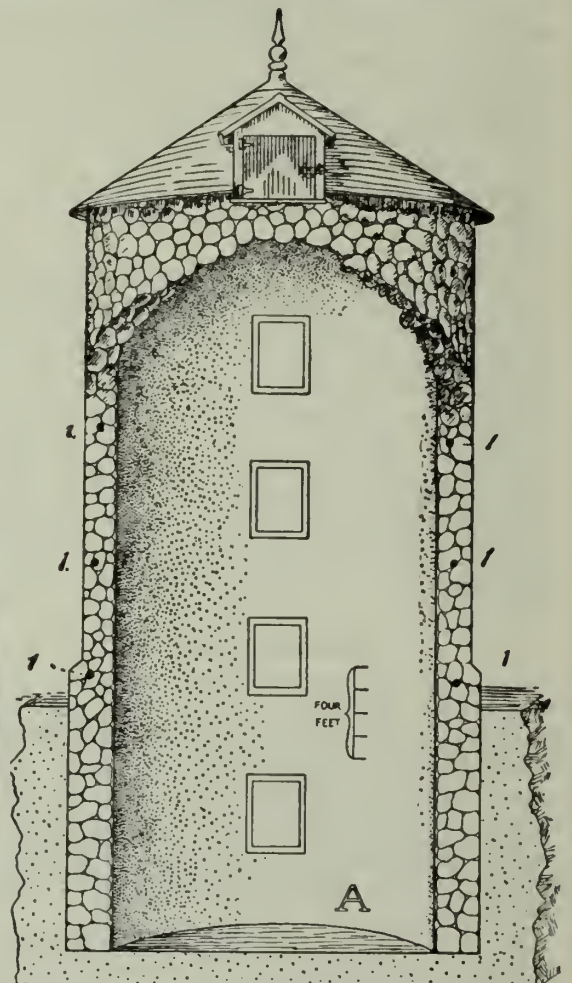
The next step should be to put on the outside layer of sheeting which, for all of the silos less than 30 feet in diameter, should be 3/4-inch lumber made by buying a good quality of fencing and taking it to the mill to have it sawed in two. The usual price for sawing fencing in two in this way is \$1 per M. The reason for getting fencing and having it sawed in this manner is to save expense. It is the custom of dealers to charge the same price for half inch as for inch

lumber, and hence buying good fencing and having it sawed reduces the cost just one half, less the cost of sawing. The studding should be covered inside and out with this sheeting, nailing thoroughly with 8-penny nails, two nails in each board at every stud. The object of the boards is to act as hoops and give the silo the needed strength.

If the silo is out of doors it will need to be covered with house siding with the thick edge rabbetted, or else veneered with a single course of brick. Several silos have been sided with half-inch lumber with both edges beveled at an angle of 45° to take the place of the rabbet. This method gives greater strength, but is not likely to keep out rain as thoroughly.

**THE SILO LINING.**—The brick lining of the silo should be laid in rich cement mortar, the bricks being previously wet. The most rigid lining will be secured by laying the brick flatwise, making the layer 4 inches thick, but with one-half the amount of brick they may be set on edge, thus considerably lessening the cost. If set on edge, as represented in the engraving, a row of spikes should be driven into the studding through the joints of every fourth course to hold the brick more securely in place until the cement has had time to season.

The mortar should not be made more than 1/4 of an inch thick and great care should be taken to leave no



An all-stone silo with conical roof and openings for feeding doors; the heavy black dots 1, 1, 1 show where iron rods may be bedded in the wall to prevent cracking from the pressure of the silage.

open space anywhere. The necessity of plastering the wall may be avoided by filling behind each brick with one-half an inch of mortar, which will keep out the air as well as if on the front side, and there will be the additional advantage of the cement not coming in direct contact with the silage juices. If care is taken in setting the brick so as to secure a smooth face, pointing the joints carefully, it will not be necessary to even whitewash the wall, and a permanent lining requiring no attention will thus be secured.

In this form of silo the brick may have one face filled with coal tar, or the vitrified paving brick may be used, giving a lining wholly air tight and permanent.

## THE DAIRY.

### Recent Comments on Dairy Bacteria.

Prof. H. W. Conn, the well-known expert in dairy bacteriology, in the eleventh annual report of the Storrs Experiment Station, makes the following observations on the changes in milk handling, due to the greater knowledge of the character and life of these microscopic plants:

It is, of course, impossible to enumerate all of the minor changes in dairy management which have been produced in dairying through all civilized communities by knowledge of the facts mentioned (the various ways of bacterial influence on milk). The treatment



of the cow, and the treatment of the milk from the very beginning to the time it is consumed by man, are modified in countless little details in accordance with the facts that are known. The general change that has been introduced is quite comprehensively expressed by the statement that dairy methods have been so altered in the last ten years that the milk from a time immediately preceding the milking to the time when it is delivered to the consumer is carefully guarded against contamination. Farmers in civilized communities have learned the chance and the danger of such contamination, and they have therefore been slowly but effectually adopting methods of protecting the milk.

**FROM THE COW.**—This occurs in the first place in the stable. Recognizing that the cow is one of the chief sources of trouble, attention is given to her. She is kept cleaner than was thought necessary a few years ago. Her udder is in many cases washed with warm water; the teats may be moistened before milking, or perhaps washed with a disinfectant solution, which, although of course not a very common procedure, does occur in many dairies where especial care is taken. In the better class of dairies it is thought as necessary to keep the cow carefully cleaned as it is to care for the horse, and the old condition of filth in which the animals were allowed to live is being improved.

**FROM THE BEDDING.**—The bedding which the animals use has been also more or less changed in view of the facts that have been discovered. Bacteriologists have shown that many of the most perplexing difficulties which the dairyman encounters in the keeping properties of his milk may be traced directly to the bedding. Instances of slimy milk and bitter milk which have troubled dairymen for a long time have been traced to the fact that the bedding used by the animals is infected with a certain malign species of bacteria, and that a change of bedding produces a mitigation of the evil at once. This, of course, gives the farmer a new vantage-ground from which he can deal with troublesome affections in his dairy.

It has been shown abundantly that a second serious source of trouble in dairy processes is in connection with the manure, for from this source many of the most troublesome kinds of bacteria are derived, which, finding their way into the milk, give rise to the most mischievous effects and produce the greatest amount of irritation to the dairyman. In short, our more intelligent dairymen have learned that strict cleanliness in the cow stall is a necessity for successful dairying.

**STEAMING VESSELS.**—Very great change has been effected in the treatment of the milk vessels by means of bacteriological discoveries. In the first place, it is slowly becoming realized by dairymen that ordinary washing, or washing with soda, or washing with boiling water, does not serve to sufficiently clean the milk vessels; and that, after any such treatment, which was always regarded as sufficient a few years ago, bacteria will be left in the milk vessels in great quantity, ready to produce trouble as soon as the milk is placed therein. As a result, new methods of washing vessels have been introduced, most of which depend upon a treatment with superheated steam, which produces heat sufficient to destroy at least a large portion of the bacteria in the vessels.

**FILTERING.**—The fact that a considerable portion of the contaminating bacteria which produce troublesome changes in milk come from dirt of various kinds, which gets into the milk during or after the milking, has led to the quite general adoption of new and more careful methods of cleaning the milk. This is done in some places by simply filtering through sand, large filters being used made of alternate layers of carefully cleaned angular grains of sand and cotton, and through these the milk passes with considerable rapidity. During its passage all of the particles of dirt of any considerable size are removed, and the keeping properties of the milk are quite noticeably increased. Such filtering does not indeed remove the bacteria from milk. Bacteria are so small that no method of filtering has been, or probably can be, devised which can remove them and not also remove the fat particles from the milk. Such a filtering only removes the large particles of dirt, but this is itself useful.

**CENTRIFUGAL.**—In other cases the cleaning is produced by centrifugal force, the milk being passed through a special machine, which is something of the same nature as the separator, but in which the revolutions are less rapid and not sufficient to separate the cream from the milk and are sufficient to separate all of the heavier particles of filth. Such a cleaning by filtration or by centrifugal force is of decided value to the purity of the milk, and the better milk companies in European cities are adopting the one or the other of these two methods.

**CEMENT FLOORS.**—An incidental result has been in the adopting of cement floors in most of the better establishments that have to do with the distribution of milk. The old style of wooden floors has been found to become so thoroughly impregnated with bacteria and so impossible to clean that they have been quite generally abandoned. Indeed, in some cities there is a police regulation that milk shall not be allowed to stand for any length of time in rooms with wooden

floors. As a result, the use of cement flooring is rapidly extending, and has been almost universally adopted. This change may be beyond question traced largely to the knowledge of bacteriology.

**COOLING.**—It has, of course, long been known that in order to keep milk it must be kept cold. Nevertheless, some of the facts discovered in this connection in recent years have been of practical value. It has been learned that the bacteria grow most readily, as a rule, at temperatures near that of the body of the cow; and, therefore, when the milk is drawn from the cow, it is at a temperature at which the bacteria grow most vigorously. As a result of this fact, there has been introduced, almost universally, the method of cooling the milk to as low a temperature as possible, immediately after it is drawn from the cow. For accomplishing this, a considerable variety of forms of apparatus have been invented in the form of milk coolers, which use either cold water or ice, and through which the milk is allowed to pass at once, after being drawn from the cow. The advantage of this cooling is very great indeed, and it has made possible the extension of the milk industry in places and under circumstances that would have been impossible otherwise. In European dairies this matter is of even more importance than in American dairying. One of the most striking differences between dairying in Europe and America is the slight use of ice in the European dairies. The milk which is brought into the cities is almost never cooled with ice. Even in the northern countries like Denmark, where ice might be supposed to be at least as easily obtained as in New England, we find that the use of ice is comparatively slight and the milk which is brought into the cities is not brought in upon ice cars, but is hurried in as quickly as possible without any attempt at artificial cooling. Under these conditions, of course, it is clear that the value of the original cooling of milk to as low a temperature as possible with cold water is a very great one. It is the one universal means of cooling milk, now adopted in Europe.

## SHEEP AND WOOL.

### Angoras for Brush Lands.

We recently had a Texas man's opinion of Angoras as land cleaners. The goat seems to be reaching eminence in this line. Writers in the Country Gentleman furnish interesting suggestions:

**BRUSH BOUNCERS.**—The present interest in Angora goats is due chiefly to their merits as brush exterminators. They are likely to become one of the largest stock raising industries on that account, and every progressive farmer should thoroughly investigate the Angora goat. As scavengers their value is inestimable, and in every instance of experiment they have accomplished even more than was expected of them. There is nothing in the way of vegetation that cattle refuse to eat that a goat will not eat with a relish; hence the value of them. A farmer must labor for what he feeds his cows, and ten or twelve goats can live on what it takes to keep one cow. But the best of all is their peculiar appetite for brush. There is no kind of brush known that a goat will not eat if he can get at it, and they are capable of climbing leaning trees and heavy brush with the greatest of ease.

If you desire to kill out young trees or saplings, you can quickly accomplish the task by chopping the tree so that it will fall. It is better to chop part way and then break them down. This leaves the roots connected to some extent with the foliage, and the goats will eat the leaves, which invariably kills the tree, roots and all. Should any sprouts come out in the following spring, the goats will make quick work of their destruction; and so it is with any class of vegetation that they can get at.

**BRUSH RANGES.**—Some people say, Why is it the goats do not eat out the range in the mountains? Simply because there are not enough goats to the acre. You can have an Angora goat farm and always have brush feed for them every year. But to do so you must have one acre of brush land to every goat. In this way the goats are not sufficient to kill the brush; but put two and a half to three goats to the acre, and you can accomplish an amount of grubbing that is incomprehensible until you see it done. It will no doubt be the means of clearing some of the millions of acres of land that could be cultivated were it not for the heavy growth of underbrush thereon.

**FENCE FOR GOATS.**—Almost every one has a mistaken idea about fencing land to hold the goats, some believing that a 5-foot poultry netting is the least height that will keep them within their bounds. It is true they are very agile, and when scared will sometimes clear a 3-foot fence with ease. A fence 4 feet high will keep them in perfectly, but the great trouble with barbed wire and board fences is that the goats will crawl through or under the fence. The best fence is a strand of 21-inch hog wire and four strands of barbed wire, the top wire being 4 feet from the ground. This kind of a fence will be sufficient to hold your goats securely, and as long as you want them.

Angoras, as well as sheep, can be kept year in and year out, day and night, and do better than under

the best herder. They are entirely at their ease they will grow larger and fatter, and bear more mohair or wool than in any other way, and pay for the full cost of the fence in a very few years. Of course, they would need sheds to protect them against rain. Should part of such mountain brush land have to be reserved for a larger growth, it should be partitioned off until large enough to have hard and rough bark. Then some good woodsman could cut off with the ax or brush hook the smaller ones, and the goats will then only touch the young shoots, as long as there are enough of them to feed on. In this way they would rather be an advantage than a detriment to forest growth, as they would keep the woodlands clean and less exposed to damage by fires.

The number of Angoras which can be kept on an acre varies with the size, character and density of the brush, and may vary from four or five acres to each Angora goat to eight and ten Angoras for each acre, and can only be determined by actual experiments.

Though not nearly as many can be kept to the acre, they really do best in well-protected forests, with small undergrowth, and it is on such land that they reach their highest perfection in Asia Minor.

## THE POULTRY YARD.

### The Great Egg Industry.

A writer for the Country Gentleman gives some facts and fancies about the national egg trade which we believe will be new to many readers. The scientific dictum, that all life is from the egg, bids fair to be matched by the future commercial fact that all trade rests on the hen's egg. Certainly there are things done with eggs now which were but recently undreamed of.

**STORING EGGS.**—When warm weather comes, and the hens begin to lay eggs in abundance, the great storage warehouses devoted to the preservation of perishable goods are filled up with their season's crop of storage eggs. Not all the eggs that come to market are fresh, nor are all the fresh eggs received disposed of to consumers before they lose their delicious freshness. If it were not for the mammoth storage houses devoted to the preservation of these fragile products of the farm, the shippers of eggs would lose thousands of dollars, and the consumers would often have to pay much higher prices than at present for these food products. By storing the eggs when abundant, and selling them when the supply from the farms is small, the storage houses help both the producer and the consumer. The equalization of prices the year round is one of the best conditions for a healthy business, and all parties are benefited thereby, except possibly the speculator, who finds his most profitable field in uncertain and violently fluctuating markets. It is this result more than anything else that has been accomplished by the storage warehouses in the handling of perishable country produce.

The cold storage houses for eggs have closely studied the problems of an industry that is small in its component parts, but mighty in its totality. From the first of April until fall, between 4,000,000 and 5,000,000 eggs are shipped to New York every day, and as the city's consumption averages only 3,000,000 to 4,000,000 eggs a day, the remainder goes into cold storage or seeks some other outlet. In the winter season the receipts of eggs in the city hardly supply the daily demand, and consumers then call upon the storage egg supply. These include the lined eggs and those held simply in cold storage at a temperature where decay is arrested.

**WASTE PRODUCTS.**—There would be a considerable loss in this cold storage business if new and little known markets for them were not found. All the cracked, broken, checked and dirty eggs are utilized, and the storage houses are even finding outlets for the shells and rotten eggs. It is in practicing these little economies that the storage houses are finding their actual profits. If they have to suffer the loss that accumulates from broken and decaying eggs they would soon be forced out of business.

**CANNED EGGS.**—One of the important outlets for the broken, cracked and injured eggs that come to the storage houses is the cannery. Canned eggs are not common household articles, and probably very few consumers of eggs have ever seen them canned. Nevertheless, great quantities of eggs are canned every year. When the shells of eggs are found to be broken, cracked or checked, they are laid aside for the cannery. Only good ones are used for this purpose, and they are broken open and the whites and yolks separated. They are then canned the same as meats, vegetables, or any other product. These canned eggs are used quite extensively by bakers and confectioners. When they need the whites of eggs for their work, it is far cheaper and more convenient to open a can of the whites already separated from the yolks. Sometimes in cold weather when eggs are very high the demand for these canned eggs by bakers and confectioners is enormous. As the eggs can be canned in the summer when they are cheap and abundant, they are sold at a reasonable price in mid-



winter. The canned eggs also find a good market in hot countries, and they are shipped to South America and other warm lands. When properly canned, the eggs will keep a long time, and they are much more serviceable than the so-called fresh eggs, which in hot countries are of a rather doubtful character.

**STALE EGGS.**—Now even the rotten and cloudy eggs are of some use in the world, and they are not a loss to the storage houses. These rotten eggs are canned, but not for consumption. Tanners use them for putting the gloss on fine leather, and they are used quite extensively in the best tanneries for this purpose. Even the shells of these broken and rotten eggs are utilized. Instead of being thrown away, they are broken up and sold to the poultrymen again. Cracked and pulverized egg shells are good for laying hens, and they help to produce the formation of eggs faster than oyster shells or green bone. In addition to this, the shells are sold as fertilizer, and they command a fair price for this. In the aggregate, the quantity of shells accumulating in a city that daily receives millions of eggs is enormous, and the value of these little economies makes the profit or loss mount up rapidly.

**KEEP THEM COOL.**—Commission men have to be pretty expeditious in handling eggs in hot weather, for twenty-four hours at the right temperature will be sufficient to start the process of incubation and spoil the eggs. Heat is the egg's greatest enemy, and farmers are not always careful enough in guarding against it. The result is that apparently fresh eggs reach New York in summer fit only for the canning factory. The process of incubation has been started, and all the cold storage in the world will not benefit them. The egg tester must determine how far gone they are, and they reach their proper destination according to the decision he makes as to their condition. If farmers could keep their eggs in an even temperature of about 30°, they would be much fresher at the end of three weeks than two-days-old eggs that have passed twenty hours in a temperature of 80°. When the eggs are received, they are immediately placed in cold storage, and some of them are shipped all the way from the farm to the city in refrigerating cars. In this way their freshness is preserved, and they are ready to go on the market as fancy fresh eggs.

#### Poultry Raising in Belgium.

The succulence of the "poulet de Bruxelles" has a very widespread reputation, not only among gourmets, but among all who have had the good fortune to travel upon the Continent and meet the same on the table. The difference in quality between the fowl above mentioned and one of the same age and size of the ordinary variety is shown by the fact that the first is sold in nearly all the markets in Belgium at double the price. For example, a young poulet de Bruxelles which we should consider about the size sufficient for a meal of two persons is sold to-day for 5 francs (96.5 cents), whereas one of the ordinary variety can be purchased for between 2 and 3 francs.

George F. Lincoln, U. S. Consul-General at Antwerp, deems the above facts so important that he has written the State Department a chicken essay giving the Brussels methods. We do not find anything in it different from the practices followed by the best American growers, but it is interesting nevertheless and may suggest to some readers the importance of care and attention to details.

**THE EGGS FOR SETTING.**—The excellence of the fowl seems to depend, as far as can be ascertained, on the careful manner in which the setting hen is treated, the cleanliness observed about her, as well as the careful feeding of the young chicken until sufficiently developed for eating purposes. Whether or not the methods pursued here differ from those followed by careful breeders in our country, it is impossible for me to say. Travelers almost invariably express their astonishment at its tenderness and juiciness.

The choice of eggs for setting purposes is considered a matter of great importance, and the freshest obtainable are almost invariably used. The best breeders seldom take eggs older than eight days for raising the best quality. Care is taken that the eggs given to one hen should be of the same age. The eggs when collected are kept at a very even and medium temperature until given to the hen, and are turned daily. This measure is taken, I am informed, to prevent the yolk, which is lighter than the white of the egg, from adhering to the top of the shell. The eggs chosen for the purpose above mentioned are also of an average size, those above medium being rejected, as they often contain double yolks. Eggs received from a distance, and consequently exposed to more or less shaking, are allowed to stand a day or two before being put under the hen. Great care is also taken that the eggs should be perfectly clean.

**HATCHING.**—The nest is prepared of straw or cut hay, perfectly clean, dry and odorless. As a rule, the setting hens are located in corners where the greatest quiet is obtainable, and are not exposed to great light. When so located, they are not disturbed for any other purpose than the placing before them of their daily supply of food and water. As the hen leaves her nest at least once a day to

search for food, to take exercise, etc., care is taken to put her food and water within reach of the nest, in order that the time that she is off the eggs may be materially shortened.

**RAISING AND FEEDING.**—When the young bird is hatched, it retains in its body part of the yolk of the egg from which it was produced, which suffices to nourish it for the first twenty-four hours, during which period only warmth is required, which is furnished either by the mother hen or must be afforded by a warm cloth, in case of the necessity of awaiting the hatching of the rest of the brood.

The food first given can be varied, but must be made up of ingredients containing large quantities of nitrogen, as this is required for the formation of the tissues. It is necessary, in fact, that the food should be composed of matter resembling in character an egg, together with milk. It is customary to mix with the food eggs, milk and the blood of earthworms, field worms, and that of a commoner variety of fish; also to introduce, for the formation of bone, certain quantities of phosphate of lime found in grain and flour. In the early days, flour should be given, on account of the facility of its digestion, grain being substituted therefor as the birds begin to gather strength. Wheat flour is generally used. The grain given is wheat, rice, millet, buckwheat and corn, raw or cooked. Cooked potatoes are also often given, as a change of diet. It is customary to vary the grain diet as much as possible and to frequently administer it mixed. The food ordinarily employed is made up as follows: Harb-boiled eggs and wheat flour are mixed in milk, a little water being added. To this paste is added a small onion finely cut up, together with lettuce when green food is scarce. The mixture is ordinarily quite stiff, as too moist food is considered harmful for the young brood.

After the first few days, a small quantity of whole grain is mixed into the paste; but if rapid development is desired, the simple paste should be continued alone.

Great care is taken to keep the young brood in a dry, warm locality, which precaution, together with the proper food, prevents inflammation of the intestines and like troubles. As a rule, the birds are confined on wet days and allowed to run about as much as possible only in fine, sunny weather. In winter a more generous diet is given to enable them to withstand the cold. The daily ration of grain for the fowls is from two and one-half to three ounces.

## THE VINEYARD.

### Vineyard Notes in Napa and Sonoma Counties.

TO THE EDITOR:—I had just returned from a hurried trip to Cloverdale, Sonoma county, when I had the pleasure of meeting Prof. Bioletti and Mr. Frank T. Swett at my home in Napa. They were on their annual bicycle trip through the vineyards of Napa county, and as they will no doubt bring valuable information on resistant vines and grafting, I prefer to answer them, and also Mr. Hoops, at a later time. There is abundance of time between now and next winter to discuss the value of cutting-grafts vs. outdoor grafting, and I do not see any urgency in that case. When the issue is prominent I hope to be there, though rather at a disadvantage, battling one against three. But I have been in the minority so often this does not scare me. What we are all after is the success of the industry, and this should be the point above all other considerations. Let us "fight it out on that line if it takes all winter," without fear or favor.

**SELLING GRAPES.**—I think the most pressing question to us now is how to dispose of our grapes to the best advantage. I studied this somewhat on my late travels, and I came to the conclusion that the outlook is decidedly favorable for the grape grower, who is at the bottom of the industry and must furnish the grapes. To look at the prospects for them, they are decidedly encouraging. There are three large firms in the field each striving for the monopoly, viz: the California Wine Association, the firm of Lachman & Jacobi and the Italian-Swiss Colony. They are competing with each other and will make it lively, while many smaller firms will also do their best to keep up prices. There is one striking discrepancy between Napa and Sonoma which struck me specially. In Napa there are empty cellars and plenty of coo-perage, while in Sonoma there seems to be a scarcity of both. The immense cistern of the Italian Colony did not turn out as well as expected, giving a heavy loss of 50,000 gallons from leakage, and the remainder was deficient in sprightliness and acidity. But this I leave with Mr. Sbarboro, the distinguished secretary of the colony, to explain. He is equal to any emergency and can no doubt give a reason for this.

**THE VINEYARDS.**—Let us return to the vineyards, the foundation of all. In Napa county they look flourishing wherever established on resistant stocks. This in the main has been Lenoir, and it is indeed cheering to see the thrifty growth and the general appearance. One vineyard, especially, near Rutherford, planted years ago by Mr. Seneca Ewer, is a wel-

come sight. The vines are trained to 6-foot stakes and present a pyramid of green, luscious foliage from top to bottom, covering the whole ground, while the surrounding vines on Vinifera roots have died out, and are replanted with Lenoir roots and grafted. Any one seeing this and doubting the resistance of the Lenoir must be hard to convince. After seeing it in all the vineyards in Napa valley, with its luxuriant foliage and crop of grapes valuable for dark red wine, I can not help feeling proud of having introduced it in this State in 1876, as stated last week in your columns. Its greatest drawback, it seems to me, is its difficulty of propagating by cuttings, as only about 50% will grow. In this respect the Rupestris St. George has a decided advantage, as nearly every cutting of it grows. But our experience, favorable as it has been so far, is only about five years old, and while I hope it will fill all the expectations of its friends and be the stock of the future, I want to see a little more of it before I prefer it to the Bourgainiana family.

**PRICES.**—The price of grapes of good varieties, I am satisfied, will go up to \$25 per ton. The Wine Association offers \$23 per ton now, and part of the money advanced to bind the bargain. This is a paying price to the grape grower, and is encouraging to new plantations.

**AROUND CLOVERDALE.**—The vineyards generally took well, as much as I could see of them in half a day's travel through them, are kept well and worked nicely, being clean of weeds and thoroughly cultivated. They show good, healthy growth and a good, medium crop of fruit. I was sorry, however, to see that some of them had been topped lately, which will bring on defoliation, dying back of the young growth and unequal ripening of the fruit. While early summer pruning in May or June is highly beneficial, as it causes the laterals to start into vigorous growth and to develop fine young foliage, which will be the best protection for the fruit during the heat of summer, it also develops the upper branches, thus securing equal ripening. The reverse happens with this late slashing, which has just the contrary effect. I was sorry to see that the hybrid Franc in the vineyard of Dr. Coomes had lost all its leaves by mildew, which of course could have been prevented by sulphuring at the right time; but, as he has gone to Nome and rented his vineyard, this had been neglected. However, Thompson's Seedless and the little white Corinth, side by side with hybrid Franc, showed healthy foliage and fine fruit, especially the Corinth, which I had never seen cultivated to a large extent in vineyard, and which pleased me very much. It seems to be very hardy and healthy, makes beautiful, large, heavily-shouldered bunches. The berries were always getting soft on this, as well as the Thompson's Seedless, and on the former looked like white pearls closely set together. I think it is worth a trial in every vineyard.

From present appearances there will be a good crop of grapes around Cloverdale; but it is a very warm valley, and the vines may yet suffer from sun scald. Several vineyards have changed hands by sale lately at good prices, and the industry seems to be in a flourishing condition. Here and there phylloxera spots appear, but the disease has not taken a very serious hold yet. That will come in time, though, and new plantations should only be made on resistant roots. Present indications seem to point to \$20 per ton for grapes at the wineries; the only trouble I foresee is the limited number of them to work up the crop in time and in the proper condition, as I am told the grapes often run up to 28° or 30° Balling. This, of course, is too high for a sound fermentation, as the temperature runs up to 80° or 85° in the board cellars they mostly have, and the result must be imperfectly fermented wines. The only remedy I can suggest is the addition of clear water to bring them down to 24° and frequent stirring of the must while fermenting. G. HUSMANN.

Napa.

#### Farmers' Institutes at the South.

Farmers' Institute work by the Agricultural Department of the State University has begun again with vigor for the new fiscal year. Last week's institutes were held at Castroville and at Pacific Grove; next week they will be held at Sonoma and week after next at Pescadero.

In southern California a long series will be held during September under the conduction of Prof. A. J. Cook, the University representative in the southern counties. The dates and places will be as follows: Aug. 29 and 30, Goleta, and Aug. 31 and Sept. 1, Carpinteria, both of Santa Barbara county; Sept. 3 and 4, Montalvo; Sept. 5 and 6, Santa Paula, and Sept. 7 and 8, Piru, all of Ventura county. It is hoped that the institute force will meet Sept. 10 at the Farmers' Clubs' picnic at the Experiment Station, Pomona. Sept. 10 and 11, Fullerton; Sept. 12 and 13, Garden Grove, and Sept. 14 and 15, Orange, all of Orange county; Sept. 17 and 18, Escondido; Sept. 19 and 20, La Mesa, and Sept. 21 and 22, Chula Vista, all of San Diego county. It is hoped and expected that two professors from the University will attend: probably Prof. Jaffa in Santa Barbara and Ventura counties and Prof. Wickson in San Diego and Orange counties. Prof. Sprague may also be in attendance at some of the meetings.



## Agricultural Review.

### ALAMEDA.

**FRUIT DRYING.**—Haywards Journal, Aug. 11: Russell & Kimhall have hought over 400 tons of apricots, paying therefor from \$12 to \$20 a ton, and over 60 tons of plums, and have contracted for 150 tons of pears, 50 tons of prunes and 100 tons of Silver prunes, all of which will be dried. In preparing this fruit for the driers employment is given to 350 people.

**PLEASANTON HOP FIELDS.**—Oakland Enquirer, Aug. 11: Of the 3300 acres belonging to the Pleasanton Hop Co., 1200 are cropped to hay and grain, 200 are in vineyard, and 1900 are devoted to hops. The first hops grown here were planted fifteen years ago, but it is only within a few years that the enterprise has been conducted on such an extensive scale. Backed with abundant capital the manager, G. A. Davis, has equipped the farm with every facility for growing and curing hops. Besides the ranch houses there are three hatteries of four kilns each. These are of modern construction, with immense "hoppers," into which the green hops are dumped and hoisted by an elevator to the top story, where they are spread on hurlap over grating, and, after having been cured by having hot air impregnated with sulphur passed through them, the dried hops are raked into the cars and transferred on elevated tracks to the baling rooms and thence into warehouses. The fields are set with poles 6x6 and 20 feet high, placed 36 feet, or six hills, apart. Across the tops of these poles are stretched wires, and from these strings are carried to the hills attached to stakes driven into the ground. In passing through one notes that those strings are knotted about 5 feet from the top. It was found that until the hop vine reaches within 5 feet of the top of the string a five-strand cord is sufficient to support it. Above that it requires an eight-strand string, and by having the strings tied a saving of many hundreds of dollars could be effected. The work of knotting the strings is done by employees during the slack season in the hop fields. The product of the Pleasanton hop fields for several seasons has been purchased by Guinness, the London brewer and manufacturer, and exported to all parts of the world. While a largely augmented force of employees is required during the hop picking season, the cultivation of the hops and various other enterprises on the ranches controlled by the company in the vicinity of Pleasanton require the services of some 300 employees throughout the year.

### BUTTE.

**MIXED HEAD OF WHEAT AND OATS.**—Chico Enterprise: R. A. Boyd brought to this office a curiosity in the shape of a mixed head of wheat and wild oats. The head is well developed and from among the grains of wheat along the stalk appear several fully developed grains of wild oats. Mr. Boyd found the curiosity near Nelson during hay harvest, and since that time many farmers have examined it, but none profess to have ever seen such a combination before.

**DUAL CROP.**—Biggs Argus, Aug. 3: A. F. Stoudt has demonstrated that it pays to grow wheat and flax together and by so doing produce a double crop on the same ground. Year before last Mr. Stoudt harvested a crop of flax and last fall just before the rains he sowed the same ground to wheat after disking the ground followed by harrowing. In time the crop sprouted, but instead of wheat alone both wheat and flax grew, a full crop of each matured, and on that six acres of land he harvested last week 2700 pounds of flax and 2835 pounds of wheat. In other words, after threshing the crop he had twenty sacks of flax and twenty-one sacks of wheat. Both crops were threshed at the same time, the wheat being sacked from the wheat spout and the flax passing through the screen and out through the cheat spout, making a perfect separation of the two grains. At the present value the income from six acres is for the flax \$2.50 per cental or \$67.50; the wheat at 90c per cental, \$25.51, a total of \$93.01, or \$15.50 per acre. Mr. Stoudt proposes to plant a large acreage in both wheat and flax next season at the proportion of eighty pounds of wheat to twenty-five pounds of flax per acre.

### COLUSA.

**LEASED LARGE WHEAT FARM.**—Colusa Sun, Aug. 11: James and Wash Snowden have leased the Boggs place and 7000 acres of the Glenn ranch. James Snowden has been on the Glenn ranch for twenty-one years, and has farmed the place known as "the home ranch" for most of the time, and this is the place he now rents. Wash has farmed the Hugh Logan land for several years. They are counted among the very best wheat growers of the Sacramento valley.

### FRESNO.

**GOOD PRICES FOR GRAPES.**—Sanger Herald, Aug. 11: One of our vineyardists has contracted his second-crop grapes to the Alma Winery at Reedley for \$15.50 per ton, while another has just sold thirty tons of selected Malagas at \$30 per ton. Owing to the erection of quite a number of large wineries in this county during the past year, there is an increased demand for grapes, and the competition among the buyers is without a parallel in the history of the wine industry of this valley.

**WHEAT HARVEST.**—Fresno Republican, Aug. 9: Harvesting is nearly over in this county, and it has been found that the yield of grain is fully as heavy as was expected earlier in the season. The average has been from three to five sacks per acre.

**BY-PRODUCT FACTORY.**—Fresno Republican, Aug. 9: Payment has been made on a twenty-acre tract by the Hooven Mercantile Co. of New York, whereon will be located the buildings of their by-product factory. These will consist of pressing, grinding, drying, cleaning, refining, engine and boiler rooms, warehouse and distillery. It is estimated that the cost of the plant and machinery will be \$80,000. The by-products utilized will be the refuse matter of the wineries, canneries and raisin seeding plants. From the seeds of the raisins and wine grapes will be made an oil. From the winery refuse cream of tartar will be manufactured. An extensive olive oil refinery will also be included as an adjunct of the establishment. From the pits of apricots prussic acid will be manufactured. After oil has been obtained from the seeds of the raisins and grapes, the residue will be utilized in the manufacture of tannin, for which Mr. Hooven holds a patent.

### KERN.

**IRRIGATION SUIT DECISION.**—Bakersfield Echo, Aug. 9: Judge Shaw of Los Angeles has handed down his decision in the suit of the Farmers' Canal Co. vs. Miller & Lux, decreeing that the Meacham Canal Co. take nothing by the action, and the shares the other companies are allowed as between themselves, when there is not enough water for all, and the priority in which they shall be served, is as follows: Kern Island Irrigating Canal Co., 300 cubic feet per second; Buena Vista Canal Co., 80 cubic feet; James Canal Co., 120; Anderson Canal Co., 20; Stine Canal Co., 150; Farmers' Canal Co., 150; Plunkett Canal Co., 40; Joice Canal Co., 40; Pioneer Canal Co., 130; Kern River Canal & Irrigating Co., 60; James & Dixon Canal Co., 40; Anderson Canal Co. (additional), 10; Central Canal Co., 850; R. K. C. & I. Co. (additional), 240. Below the junction of the slough with the Farmers' canal the decree allows 11 feet of water, to be divided as follows: C. Kerr, 1 cubic foot; Wible Orchard Co., 1.75; Solomon Jewett, 1.75; Miller & Lux, 6.50. The decree practically leaves the titles the same as they were when they originated and before the Miller & Lux estate began its various actions at law.

### LOS ANGELES.

**IMPORTANT WATER SUIT.**—Los Angeles, Aug. 6: A contest of far-reaching importance, involving the rights of 4500 people, whose aggregate property holdings is over 20,000 acres, worth \$5,000,000, was called in the Land Office here to-day and was continued to Sept. 3d. The parties to the action are the Electric Power and the Electric Water Companies of Los Angeles on one hand, and the leading landowners of Azusa, Covina and Duarte on the other. The latter claim that the two corporations are seeking to corral the waters of the San Gabriel river and will injure them beyond reparation. It is stated that the area affected will ship 1100 carloads of deciduous fruits this season, worth between \$1,000,000 and \$1,200,000, and if the year were an ordinary one, the complaint recites, the total shipments would aggregate 5000 cars. Eighteen packing houses are located in the area affected by the litigation, and they employ during the season a force of 750 persons, a similar number being necessary to harvest the crops. All water for the cultivation of this district, the petitioners declare, comes from the San Gabriel river. The proceedings arose out of a petition of the companies to the Secretary of the Interior for right of way for the use of the waters of the San Gabriel river.

### MERCED.

**GRAIN CROPS SHORT.**—Merced Sun, Aug. 10: The work of harvesting grain crops in this vicinity is nearly completed. A well-known grain dealer stated that the barley yield would fall 40% below the estimate made before harvest, and the wheat crop fully 25%. The shrinkage of the wheat yield is attributed to rust. Another thing which brings down the grain yield in comparison to the first estimate is the fact that many ranchers failed to get

in as high an acreage as was anticipated. A great deal of summer-fallow was not sown which was included in the estimate of the output.

### MONTEREY.

**SHORT BEET CROP.**—San Jose Mercury, Aug. 8: Dr. D. F. McGraw, who has returned from a trip to the Spreckels sugar refinery, reports that there are practically no beets in the Salinas section. They were planted as usual, but did not come up. There should have been a crop of at least 300,000 tons and the highest estimate of this year's yield is 65,000 tons. The dependence for beets this year will be principally upon the crop around Pajaro, which is said to be a fine one. "Through the courtesy of Head Chemist Doyer, a party of us were enabled to get a very interesting insight into the whole process of making sugar," said Dr. McGraw in an interview. "We were very much impressed with the high degree of scientific completeness which every department of the sugar-making business has attained through the skill and experience of expert chemists and machinists. The whole life history of every ton of beets that is brought in is secured, and an exact record kept as to the results for each particular ton through all the processes. A record is kept as to where the beets were raised, when they were planted, the manner of cultivation, etc., and from this data and the results in the amount and quality of the yield of sugar it is possible to give the growers much valuable information. They can be told the locality and conditions under which the best beets, yielding the most and best quality of sugar, can be produced."

### NAPA.

**FRUIT PRESERVATION.**—TO THE EDITOR: The S. M. Tool Fruit Cannery, which was formerly located in Napa, on the bank of the creek, has been removed to Summit railroad station, 2 miles north of the city, adjacent to the Tool orchard of nearly 100 acres, and in the midst of the largest fruit belt of the county. Here 250 employees are busily engaged canning peaches, pears, plums and blackberries. Some drying is also done at the cannery. Most of the employees are camping in the vicinity of the works. Within half a mile of the cannery W. M. Fisher, who owns an orchard of eighty-five acres in the same locality, has just finished the erection of a large three-story drier and packing house. The building is 40x90 feet in dimensions, with an engine room as an annex. In the latter are steam boilers to assist in processing prunes. Mr. Fisher has qualified as a packer for the association, and expects to ship seventy-five carloads of prunes the present season and about ten carloads of other dried fruits. He has purchased already from his neighbors 150 tons of Crawford peaches and 100 tons of pears, all of which are being dried in the extensive yard adjacent to the drier. This institution is looked upon as a great aid to fruit preservation in the Napa valley. H. G. P.

### RIVERSIDE.

**TAKING UP DESERT LAND.**—Riverside Press: There is a great rush to take up land on the Colorado desert. The entries for May were 3800 acres, for June 1842, and for July 7444 acres, making a total of 13,086 acres. A deposit of 25 cents per acre is required.

### SACRAMENTO.

**PRICES FOR HOP PICKING.**—Sacramento Record-Union, Aug. 12: In conversation with a reporter a prominent grower said: "Hops are picked at so much per hundred pounds, green, but in drying they fall off three and one-half pounds to one, so 1 cent per pound, green, means 3½ cents per pound dry. This is for picking alone, to which must be added the cost of cloth, sulphur, twine, wood, labor, insurance, cultivation, etc. Hop growers have concluded that they cannot afford to pay more than 80 cents per hundred pounds, and as there are but few leaves this year, and the hops are easy to pick, pickers should make good wages at these prices."

### SAN BERNARDINO.

**HORTICULTURAL COMMISSION.**—Redlands Facts, Aug. 8: The report of the Board of Horticultural Commissioners for July gives expenses amounting to \$1957.82. The principal item, \$1310, was for chemicals, which will be repaid to the treasury. Continuing, the report states that "we have fixed upon the price of \$2.25 per day for the use of each batch of tents. This will keep them in repair, and the cost will be thrown where it rightfully belongs. The price paid for the cyanide was 32½ cents per pound, and the price of sulphuric acid was .02½ per pound wholesale. We will retail them at 33 cents for cyanide and .03½ for acid. The small extra cost is to make up for leakage and possible loss. We now are at work in the west end of the county with three tent crews and have about 800 acres of orchard already booked for fumigation, with a prospect of

200 acres more yet to come in. This work is mostly on orange trees, but there will possibly be a few olives."

### SAN DIEGO.

**LEMON PRICES LOWER.**—San Diego Union, Aug. 9: The unusually high prices paid for lemons did not hold out and within the past week a fall of ½ cent has taken place. The price was 2½ to 3 cents, with the growers not anxious to sell, but now the price is from 2 to 2½ cents a pound, with the growers not holding back. Despite the fall the price is still considered to be very good and slightly above the average. In giving reasons for the decline a shipper said: "As near as I can get at the situation, the high prices of the past forty or fifty days stimulated importations from Mediterranean points and encouraged foreign growers to ship in more of their fruit. Another reason is that the high prices cut down consumption. Many dealers began to get afraid of the high prices, fearing that a slump would take place, and they would be the losers thereby. This caused the speculative value to go out, and the fruit is now going for consumption."

### SANTA CLARA.

**WINERY BURNED.**—San Jose Mercury, Aug. 14: The winery of the Santa Ynez Vineyard, near Evergreen, belonging to the Paul O. Burns Wine Co. was burned last evening. Eight large tanks, containing about 50,000 gallons of wine, were destroyed, together with the winery, cooperage, engine and other machinery, tank house and some other buildings. The loss was about \$12,000.

**NEW CAN FACTORY.**—Mercury, Aug. 14: A site has been procured for the new can factory of the Great Western Can Co. It is the design to inaugurate a factory with a capacity of from 30,000,000 to 50,000,000 fruit cans per year. The machinery will be chiefly that now in use in the can making department of the California Canneries. The enterprise, however, will be independent of that corporation. The officers of the Great Western Can Co. are: President and manager, Charles Joselyn; vice-president, L. P. Behrens; secretary, J. M. Quay; directors—A. Johnson, A. W. Forbes and Dr. William Martin.

**MUTUAL FIRE INSURANCE.**—Mercury, Aug. 12: The organization of the Santa Clara County Fire Insurance Co. has been completed and policies will be issued to take effect Sept. 1st. The following are the officers of the company: S. P. Saunders, president; Judge B. G. Hurlbert, vice-president; H. J. Ball, treasurer; Joseph Taylor, secretary.

**DRYING AND CANNING.**—San Jose Mercury, Aug. 13: The prune season at Union opened last week with heavy pickings. The fruit will be of fine quality throughout the district, and orchardists anticipate an unusually heavy crop. Peaches are ripening rapidly and drawing to a close. Early grapes are being picked for the market. Even the almonds are ahead of time and culling will begin next week. At Campbell the prune harvest has commenced, but the fruit is coming in rather slowly so far on account of the cool weather that has prevailed the past week. We learn from observation through the orchards of this section that the quality of prunes this season will be above the average. There is some poor and defective fruit, but the proportion is a very small fraction of the whole. As to quantity, it is the opinion of many growers that the crop will run far short of earlier estimates. The Ainsley cannery is employing a force of nearly 500 hands this week exclusively on pears, which seem to be of a fine quality this year. In a week or two more Cling peaches will also be on the programme. Daily shipments of dried fruits and canned goods are now being made from the railroad depot, six carloads being forwarded yesterday.

### SOLANO.

**CREAMERY AT DIXON.**—TO THE EDITOR: The creamery at Dixon, which began operations on the 8th of March last, is proving a prosperous institution. Despite unfavorable conditions as to dairy feed since then, the number of patrons, both at Dixon and the skimming station in Davisville, has gradually increased, until now there are fifteen at Dixon and eighteen at Davisville. At the former place 1800 pounds of milk are received daily. The largest patron furnishes about 235 pounds daily. The creamery plant is an excellent one, well housed in a frame building, with double walks and with cement floor. An ice plant in connection can be run by electric power. The same power propels the churn. The De Laval separator is run by steam. The butter is put up in neatly labeled packages and is marketed at Sacramento. The demand exceeds the supply. L. Mason, formerly of Illinois, but latterly of Utah, is butter-maker, A. Kerr president of creamery, F. A. Hutton secretary. H. G. P.



## THE HOME CIRCLE.

## A King's Soliloquy.

How many thousand of my poorest subjects  
Are at this hour asleep! O sleep! O gentle sleep!  
Natura's soft nurse, how have I frightened thee,  
That thou no more wilt weigh my eyelids down,  
And steep my senses in forgetfulness?  
Why rather, sleep, liost thou in smoky cribs,  
Upon uneasy pallets stretching thee,  
And hushed with buzzing night-flies to thy slumber,  
Than in the perfumed chambers of the great,  
Under the canopies of costly state,  
And lulled with sounds of sweet melody?  
O thou dull god! why liost thou with the vile,  
In loathsome beds, and loav'st the kingly couch  
A watch-case, or a common 'larum-bell?  
Wilt thou upon the high and giddy mast  
Seal up the ship-boy's eyes, and rock his brains  
In cradle of the rude imperious surge,  
And in the visitation of the winds,  
Who take the ruffian billows by the top,  
Curling their monstrous heads, and hanging them  
With deafening clamors in the slippery clouds,  
That, with the hurly, death itself awakes?  
Canst thou, O partial sleep! give thy repose  
To the wet sea-boy in an hour so rude;  
And in the calmest and most stillest night,  
With all appliances and means to boot,  
Deny it to a king? Then, happy low, lie down;  
Uneasy lies the head that wears a crown.

—Shakespeare (Henry IV).

## In Old Manomet Village.

The wooden church at Manomet was old and weather-worn. On summer Sabbaths swallows would dart in through its open windows. Often I've seen Elizabeth leaning back in her mother's high, hard pew, her beautiful eyes following the bright winged things while the minister prayed and exhorted.

Next to the church stood the school house. Elizabeth sat near me on one of its wooden benches. Sometimes we studied from the same spelling book. She was all pink and white, like may-flowers under the pine needles in spring. Her brown hair curled thick about her shoulders, and her eyes were dark like the sea in a storm. I wasn't ten years old when I fell in love with Elizabeth. My head is white now, but I love her memory still.

Besides keeping the village store, my father made fish lines, and sold them at different places along Cape Cod. At certain times he would start off to collect, and often I went in the wagon with him. One day, on a journey of this kind, we stopped at a little store in a sandy wind-blown town, and found that the proprietor had just died. His widow was crying as though her heart would break.

"Jonas was carried out only yesterday," she said to my father. "We sold all your lines but I've had to spend the money for his sickness and burial. I want to pay you, but there isn't a dollar left. Will you look around the store, sir, and take goods enough to square our account?" My father consented to the plan, and cast about to see what he could find. At last he stopped before a shelf piled with bonnets—big scoops, fitting into each other like spoons.

"They came from a ship," said the widow, "that was wrecked out here on the shoals, just before Jonas fell sick. They are good, foreign straw, you see, and all the latest fashion. I brushed the sand from them myself, and dried them well. They're not hurt one bit, sir, and they'll be sure to sell."

My father stood awhile looking at the queer things. Then he answered, "I'll take the bonnets, ma'am, and call your debt canceled." The next morning they were spread out for sale in our store window, and that same day Captain Jack Rolfe came home from

sea. Perhaps you don't see the connection betwixt the bonnets and the Captain. But my father saw it, when all the marriageable girls in town came hurrying to our store for the latest fashion in scoops. Captain Jack was Manomet-born, but he had gone early to sea, and was now master of a New Bedford whaler.

Whale oil was worth money in those days—everybody employed it for artificial light and the lubrication of machinery, and whaling masters made handsome fortunes. Captain Rolfe was just the man to have a hand in such luck when it was going; and being also a handsome, dashing fellow, gay and good natured, his arrival in the town set the girls in a flutter. It was on Friday, I remember, and the rush for the bonnets continued till the last one was sold. My sister, Lucinda, had the first choice. She took a black and white straw, and loaded it with flowers and ribbons till it looked like nothing earthly.

"When he was last in Manomet, Jack Rolfe used to see me home from singing school; and when he went away, he promised to bring me a present from Greenland. I always liked Jack," confessed Cindy. "Father says if he makes another voyage like the last, he can quit the sea and settle down at his ease."

"My eyes!" said I, deeply impressed, "he must have harpooned a lot of whales!"

"Yes, and the captain of a four-boat ship like Jack's, is entitled to one puncheon of oil out of every—"

"Lucinda!" interrupted my mother, "you are going on scandalous. Stop that talk, and put the suet in the pudding."

About noon the door of our store opened again, and a new customer fluttered in. It was Elizabeth, panting hard, and grasping a silver piece in her hand. Father was at dinner, so he sent me behind the counter to serve. Elizabeth and I were of the same age—sixteen—but her head stood an inch or two higher than mine.

"Joey," she said, breathlessly, "I want to buy one of those new bonnets."

"They're all gone," I answered. "Mother sold the last before the clock struck 12."

Her face fell. "Oh, Joey, are you sure? Haven't you one left?" I made a pretence of rummaging through the window, though I knew no bonnet was there.

"All the girls in town seem possessed to-day," I explained. "They've trooped to this store ever since daylight—"

"But mother never heard of the bonnets till well into the morning," grieved Elizabeth. "Then she gave me this money, and I ran every step of the way here to get one." Fired with sudden jealousy, I answered, Good Lord! girls are awful fools, 'Lisbeth! What a fuss you are all making over one oily whaleman, to be sure!" Now it happened that the news of Rolfe's return had not yet reached the Miller house, and Elizabeth looked bewildered.

"I don't know what you mean Joey," I wasn't going to enlighten her, so I went on poking through the window.

"Mother can't afford me many new things," she explained in a trembling voice, "but this time she said I should be like the other girls. My old hat is very shabby—not fit for Sunday wear any longer. Oh, haven't you overlooked one bonnet in some corner, Joey?"

"No, I answered, "here's salt and tea, and calico, and shingle nails, and codfish, but not the ghost of a bonnet, 'Lisbeth. I wish I'd known it in time, though—I'd have saved the whole batch for you."

She was awfully disappointed. "Never mind," she tried to say, "thank you, Joey." But she choked up suddenly, and hurried out of the store. I looked through the window, and I saw that she was crying. I waited till I heard Cindy rattling the dinner things in the kitchen, and then I sneaked out to her.

"I'll wipe the dishes for you, Cindy," I said.

She stared at me, with her nose in the air, as though scenting secrets.

"Good boy!" said she, "you're not often taken this way."

"Say Cindy, what price did father put on them Cape Cod bonnets?" I inquired.

"A dollar," said Cindy.

"I've got two silver dollars, and some tame rabbits, and an old gun—I'll give the whole business for that coal scuttle of yours, Cindy." The dish cloth dropped from her hand.

"The boy is crazy!" said she.

"Oh, come now!" I urged, "you'll never get another offer like it—two dollars in money, and the rabbits, and the gun." Cindy skipped to a cupboard, and before I was aware, whipped out her new headgear, and plumped it squarely on my head, tying the ribbons tight under my chin. I was a brawny, freckled lad, and there was cause, no doubt, for her shrieks of laughter as she danced around me.

"Oh, Joey, you are a show!" she cried. "Would you like to go to church in it Sunday morning? You must have my petticoat, too, and my new mantle, and my turkey tail fan! Father, father!" raising her voice, "come quick, and see our Joey!" This was too much. The kitchen door stood open—with a leap I gained the garden. My first thought was to strike a bee line for the Miller house, and give my prize to Elizabeth; but Cindy was close at my heels. As I dodged through the currant bushes and bean poles, and trampled mother's sage bed, I found that girl gaining on me. I tugged at her infernal bonnet, but the ribbons were in a knot and I couldn't loose them. At the foot of the garden was an old disused well that father had partly covered. The curb was gone, and the mouth mostly concealed by brushwood. In my haste I blundered into it. The water was like ice, and I gave a yell as I went down. Cindy fished me out, and when she had taken off the scoop euffed me handsomely.

"Hang your bonnet!" said I. "First 'twas wrecked in salt water, now it's got a plunge in fresh. In its present state, I wouldn't give more than the gun for it."

Cindy scurried back to the house to dry the scoop, and I was forced to abandon all further attempt to console Elizabeth.

Sunday came. The meeting house was a sight to behold. The girls wore the Cape Cod bonnets—all but Elizabeth. She appeared in her old hat, with eyes cast down, as though ashamed. But her face was like a white rose, and her brown curls tumbled, thick and fine, about her neck and shoulders. Service began. Through the open windows came the breath of woods and sea, and the odor of caraway and fennel circulated among the congregation. Deacon Brown went to sleep, and the tithingman was prodding the snickering boys, when a tall young fellow entered the church and walked down the aisle, glancing around for a vacant seat. Every place was filled but the Miller pew, and, seeing this, the late comer coolly stepped inside and seated himself by Elizabeth. The girls began to stare and whisper. Cindy nudged mother, and dropped her Bible with a disgraceful noise. But Captain Rolfe seemed unaware of the sensation he was creating. He listened soberly to the minister in the high pulpit, found all the hymns for Elizabeth, and joined his deep bass to her clear treble when the congregation sang. As soon as the benediction was pronounced, I leaned over to speak to the Millers, but Rolfe was ahead of me.

"Do you remember the morning I went away?" I heard him ask.

"Yes," answered Elizabeth, "I stood at the gate, and waved you goodbye as you walked down the street."

"You did!" said he; "and you wished me good luck. And good luck followed me throughout the voyage. Elizabeth, I think I owe it all to you."

"I cannot believe that!" she protested laughingly.

"But I do. Sailors are a superstitious lot. You have grown a good bit in my absence, but I knew you as soon as I entered the church." He greeted all the town folk cordially, but kept close to the Millers, and finally walked away with them down the hot, dusty road.

Cindy was bursting with wrath and envy.

"Did you ever see the beat of that?" said she, as we pursued our homeward way together, "and Elizabeth Miller was the only girl in church who didn't wear a new bonnet."

"And who didn't need one," I answered. "The rest of you can't hold a tallow dip to Elizabeth."

"Hear the boy!" cried Cindy. "You've long been sweet on 'Lisbeth, but say, Joey, do you think she will wait for you now?" That night Cindy returned from prayer meeting, and told us that Rolfe had been sitting again in the Miller pew, and that he had gone home through the moonlight with Elizabeth. My heart burned like a hot coal. For hours I tossed sleeplessly, thinking of the whaleman. The next morning he walked into our store, and laid a white bearskin on the counter before Cindy.

"I promised you a present from Greenland, you remember," said he, and there it is." He was nice and friendly with her, but when he went away she made a wry face.

"A blind man can see what Jack means," said she. "He doesn't joke and laugh with Elizabeth; he just keeps still, and looks at her."

I bore my torment for a while, then I took the old gun that I had offered Cindy as part payment for her bonnet, and started for the beach, where the seafaring folk were usually to be found. As I went plunging through the wood, I stumbled against a man who was cutting letters on the trunk of a tree, and singing softly to himself as he worked.

"Hello, Joey!" he called, gay as a lark. "Looking for squirrels?"

"Of course," I answered glibly; "have you seen any?"

"No," said the Captain. He finished the last letter with a flourish, shut his jackknife, and put it in his pocket. I sidled up to the tree, and lo! he had hacked Elizabeth's initials in the green bark.

"Come down to the beach, Joey," said Captain Jack, "and have a sail with me. There's no wind stirring, but I'll whistle for a capful." And whistle he did, as we strode down the path—the sweetest, clearest notes I ever heard. And presently something ruffled the water, the little waves began to leap; a cool murmur came up as it seemed, from the heart of the sea; the Captain made the boat ready, and we jumped in.

"That was pretty well done!" said I, admiringly.

"It is my good fortune, Joey, to always get what I want," laughed he. As he trimmed the sail he fell to telling me about his voyages in the South Pacific and the awful white North; of doubling the black precipices of Cape Horn, with floating icebergs threatening the ship on every side; of how the sea monsters were harpooned, and the perils of the whalemen; of the cruel foe, and the long days in southern seas hunting for sperm. I could have listened to the man forever! I forgot 'Lisbeth and the old gun, and when I trudged home my head was full of whaling stations, and blubber, and big fish, and sharp, clinker-built boats, and I acknowledged in my heart that Jack Rolfe was the finest fellow in the world. But presently the spell which he had thrown upon me passed away, and my jealousy revived. Though I no longer wished to harm the Captain, I saw that I must steal a march upon him. At nightfall I went to Elizabeth's house, and found her leaning on the gate. She wore a muslin gown that looked like a white cloud, and some blush roses were dying in her bosom.

"Elizabeth," said I, "I want you to promise to marry me when I grow up." She opened wide her beautiful eyes.

"That is a long time ahead, Joey."

"Only five years," I urged. "You and I are of the same age. You ought to be willing to wait for me five years, for I love you tremendously, Elizabeth." Somebody came up to us on the other side of the gate and, leaning over, put an arm around my companion.

"Here is another person that loves Elizabeth tremendously," said Captain Rolfe, with laughter in his voice, "and as he is already grown up she need not



wait to marry him, Joey. Ah, my lad, you are too late—Elizabeth is promised to me. But, cheer up! you shall dance at her wedding."

There is no more to tell. He wasn't the man to let grass grow under his shoes. He married Elizabeth, and carried her off to the other side of the world. And the morning they left the village I wished Cindy had never fished me out of the old well. Even to this far day my heart thrills to the name of Elizabeth.—Leslie's Monthly.

#### Infanta Eulalie on American Girls.

In the United States the young women have reached the very acme of feminine independence. I like this, first of all, because it is in my way. When I visited the United States I found myself in complete accord with American girls upon this point of independence. It differentiates the American girl from her sisters of Europe. It has enormous advantages, and, properly understood, it implies the reverse of harm. Independence, rightly conceived and practiced, is neither harmful nor unbecoming. In southern countries the difference between honest independence, on the one hand, and what is improper, or, perhaps, what is merely not correct, on the other, is not quite comprehended. National customs and traditions have much to do with this. In some of the older countries, where social usages are strictly conventional, women could be induced more easily to violate a commandment of the Decalogue than a rule of society. The genesis of the various national customs regarding certain feminine proprieties may be traced to the difference between Eastern and Western civilizations. For instance, in southern Spain, where Arab or Moorish customs prevail, women can not go out alone without calling forth adverse comment. The Arabs, or Moors, as we style them in Spain, are very jealous of their women. I have known a lady to sit for hours in the house of a friend awaiting the return of her maid rather than cross the street alone to her home. She was neither young nor pretty. Where Oriental civilization is strongest in Europe women have the least liberty. In northern Spain female restrictions are not so severe as in the south. In France they are growing gradually less. In England women have more freedom than on the Continent. In the United States, as I have said, the fair sex have reached the plenitude of independence.

#### Pluck Wins.

There are few, if any, young men who do not desire to make themselves useful, but may fall through lack of energy to make the effort necessary to attain the required preparation. Remember, young men, it is pluck that wins. You may have natural ability and every other qualification, but if you are wanting in energy and perseverance, or to be perfectly frank with you, if you are lazy and fickle, you will come far short of success in any laudable undertaking. Don't say there are no opportunities; the brave make opportunities. Remember the motto upon the old Norseman's ax, "I'll find a way or make one." Don't be idle; do something. Have a purpose in life and bend all your energies to its accomplishment. Improve your time; earn what you can; save your earnings, and acquire a useful education. The world wants you if you can do well the work it offers. Depend upon it, there is a future for you if you will work for it with a singleness of purpose.

"There is nothing," says Plato, "so delightful as the hearing or speaking of truth." For this reason there is no conversation so agreeable as that of the man of integrity, who hears without any intention to betray, and speaks without any intention to deceive.—Addison.

A BIBLE and a newspaper in every house, a good school in every district—all studied and appreciated as they merit—are the principal support of virtue, morality and civil liberty.—Benjamin Franklin.

#### Harder to Say No Than Yes.

That he was a most exemplary young man and in every way worthy of the favor of any woman whom he might seek in marriage there was no denying, but he was slow on some points of reciprocal affection, and he needed to be shaken up a bit. He was fond of discussing sociological and moral questions and once started on his hobby he could scarcely be headed in any other direction. He had been quite devoted in his attentions to one young woman for as much as six months, but she had been unable to bring him to his senses, though she was willing to confess that she had tried repeatedly to do so. Of course, she had done it in the delicate ways women have in those matters, but what he needed was a club.

Not a great while ago he was calling as usual, and as usual he was neglecting sentiment for something that only made a girl tired. This time he was moralizing on the temptations of life and the proneness of people to yield without making the proper effort against them in whatever form they might appear.

"However," he said in conclusion, displaying a commendable spirit of charity for the weak, "it is a very difficult thing for any one to say 'No.'"

Here was an unexpected chance for her.

"And conversely," she responded slowly, so he could get the full force of it, "it should be very easy for one to say 'Yes.'"

He looked her straight in the eyes at last, and a hush fell upon the scene.

"Um-er-um," he hesitated, "Miss Kate, am I a chump?"

"It is very difficult for one to say 'No,'" she said with a pretty little smile, and later she found it quite easy to say "Yes."—Washington Star.

#### Mean and Cruel.

The Arabians have a quaint old story that has a noble lesson in it, says an exchange. A haughty favorite of an Oriental monarch, who was passing the highway—so runs the story—threw a stone at a poor dervish, or priest. The dervish did not dare to throw it back at the man who had assaulted him, for he knew the favorite was very powerful. So he picked up the stone and put it carefully in his pocket, saying to himself: "The time for revenge will come by-and-by, and then I will repay him for it." Not long afterward this same dervish, in walking through the city, saw a crowd coming toward him. He hastened to see what was the matter, and found, to his astonishment, that his enemy, the favorite, who had fallen into disgrace with the king, was being paraded through the principal streets on a camel, exposed to the jests and insults of the populace. The dervish, seeing all this, hastily grasped the stone which he carried in his pocket, saying to himself: "The time for my revenge has now come, and I will repay him for his insulting conduct." But, after considering a moment, he threw the stone away, saying: "The time for revenge never comes; for if our enemy is powerful, revenge is dangerous as well as foolish; and if he is weak and wretched, then revenge is worse than foolish, it is mean and cruel. And in all cases it is forbidden and wicked."

#### Electrical Kitchens.

In Utica, a block of new apartment houses has just been furnished with a complete installation of electric cooking utensils in each flat. The electrical kitchen furniture consists of three round platters or "stoves," an oven and broiler, states the New York Sun. It is declared that meats broiled on the electric gridiron are much more palatable than those charred and scorched in the ordinary way over hot coals. The most remarkable feature of these electrical kitchens is that the stoves, etc., are simply placed on an ordinary kitchen table, and when the cooking is completed can be stowed away in a convenient closet, leaving the kitchen free of even a trace of cookery. Space is thus saved, and the kitchen can be

as small as the conscience of the architect will permit, because of this saving, and also because the electrical utensils give off no heat. All of the heat is used in the cooking and not in warming and vitiating the air of the room. The flats are also provided with electric hair curling heaters, much approved by the feminine tenants.

### DOMESTIC ECONOMY.

#### Canning Tomatoes.

The first step for success in canning tomatoes is the proper selection of the vegetable. Reject all soft, overripe tomatoes as well as those underripe, for only firm, solid, well-reddened tomatoes will produce a perfect result, states a writer in the American Agriculturist. Before proceeding further get the cans ready. Whether old or new are used, wash them in cold water, then in hot water, in which a plentiful supply of soap powder or sal soda has been dissolved. This will sweeten them and destroy any lingering taint. Especially examine the covers and clean with a small scrubbing brush, and then plunge each jar and cover into boiling water. This will destroy any floating mold or fungus germs that may start future fermentation.

A word about the kind of cans used. Personally, I much prefer glass for everything. Stone cannot be depended upon, for if a small spot is not covered by the glaze air will come through the porous ware. Then, too, the salt glaze is gradually destroyed by use. Tin I never use, but if you use tin cans use new ones and wash as carefully as the glass.

Now you are ready to prepare your fruit. Scald a few at a time in boiling water, letting them remain in the water only long enough to loosen the skins. Remove all at once and you will not have mushy fruit from overscalding. Peel all you are to can before you begin, so you can give undivided attention to the cooking. Put only enough in the kettle at one time to fill a few cans, then the last will not be overcooked and watery.

Do not put any water in the kettle, as enough juice will have run from them while peeling to start the first kettle. Season with salt as for the table. Let them boil up until thoroughly scalded, but it is not necessary for each tomato to soften, as quite solid fruit may be heated through. Just here your judgment must be used. Have the fruit as nearly whole as possible, but if not scalded through they will not keep. Fill to the brim one can at a time. Use a new rubber and a cover carefully fitted previously, so there will be no delay.

Right here you must work fast. Fill the can with the boiling fruit, add one more tomato, wipe the seeds off from about the rubber, screw on the top, which will press down the extra tomato and insure a full can. After the top is screwed on as tightly as possible reverse the can for a moment, and if by any chance there is an imperfection in the cover, can or rubber, or a misfit, a few bubbles of juice will escape, and you must return the contents of the can to the kettle and do your work over. This often saves a good many failures.

You will have much nicer canned tomatoes if you fill the cans with the more solid parts and only pour in enough juice to fill in the spaces. The last of the juice may be boiled down for a tomato soup.

#### Domestic Hints.

**FRENCH DRESSING.**—French dressing is simply two-thirds oil, one-third vinegar, seasoned with pepper and salt to taste. Pour out the vinegar, add the oil slowly, stirring constantly; then add pepper and salt. About six tablespoonfuls of dressing for an ordinary salad.

**BAKED CABBAGE.**—Cut the outside leaves from a firm, small cabbage; put on in cold water, and boil fifteen minutes; drain off this water and pour over boiling water; let it soak until tender, then drain it, set aside until

cool, then chop it fine, add two well-beaten eggs, three tablespoonfuls of milk, one tablespoonful of butter, with salt and pepper. Stir all together, put in a baking dish, bake until brown. Serve hot.

**OATMEAL COOKIES.**—Cream three-fourths of a cupful of butter with one cupful of sugar; add two well-beaten eggs. Sift three-fourths of a teaspoonful of soda into two cupfuls of flour; add one-half a teaspoonful of salt, one teaspoonful of cinnamon; now add to the mixture two cupfuls of uncooked rolled oats and one scant cupful of chopped raisins sprinkled with a little flour. Drop by the teaspoonful into a greased pan; bake in moderate oven.

**SAVORY SALAD.**—Peel six quite small tomatoes and remove from the stem end a teaspoonful of the pulp. Dust each cavity with salt and pepper and fill with a mixture prepared by smoothly blending five teaspoonfuls of crushed peanut meats with the same amount of grated egg yolk and a tablespoonful of cream; season with salt, spoonful of salt; fill the tomatoes (piling quite high) and arrange each on four or five crisp lettuce leaves. At the table pour over a French dressing.

**ECONOMICAL PUDDING.**—Bake any remains of bread a golden brown and crush them to a fine powder while hot. Of these take four ounces, two ounces of brown sugar or golden syrup, two ounces of raisins or dried cherries, half a pint of milk and the same of boiling water, together with half a teaspoonful of allspice. Pour the boiling water on the crumbs, stir well and let soak till soft, then mix in all the other ingredients and pour the mixture into a dish plentifully rubbed with butter or well clarified dripping, and bake for twenty or twenty-five minutes.

#### Hints to Housekeepers.

After frying fish or onions put a little vinegar into the pan, and it will completely remove the odor.

Never let vegetables stand in the water in which they were boiled. Drain the moment they are done, and dress.

Breakfast cocoa may be used in cooking in place of chocolate, for it gives a good result at a less price, if a few drops of vanilla flavoring be added to it.

Eat raisins freely, either cooked or raw, after removing the seeds, for their nutritive value is great, and they contain all the elements necessary to health.

Plaster of Paris ornaments can be cleaned by covering them with a thick layer of starch. After applying let it dry thoroughly, then brush, and the dust will come off with the starch.

Persons who complain that breakfast cereals do not appear to digest well will find and improvement when such food is eaten unsweetened. Taken with cream alone it is readily digested, whereas with sugar it often ferments in the stomach.

The following, giving the time for the boiling of vegetables, will be of value to many cooks: Asparagus, 15 to 20 minutes; beans (shell), 1 to 2 hours; beans (string), 2 hours; young beets, 45 to 60 minutes; cabbage, 30 to 45 minutes; carrots, 40 minutes; cauliflower, 30 to 45 minutes; green corn, 5 to 8 minutes; onions, 30 to 45 minutes; oyster plant, 30 to 60 minutes; parsnips, 30 to 45 minutes; peas, 15 to 20 minutes; potatoes, 20 to 30 minutes; spinach 20 to 30 minutes; squash, 20 to 30 minutes; tomatoes, 15 to 20 minutes.

String beans should be covered with cold water as soon as gathered and not be allowed to stand after they are cut up. Sufficient cooking is the exception rather than the rule. They require from one to three hours' steady boiling, according to variety and age. If allowed to simmer uncovered towards the last their richness and flavor are greatly increased. Season with salt, pepper and a generous allowance of butter when the cover is removed; add one or two well-beaten eggs to the cream; add and stir the beans for five minutes. A seasoning of lemon juice is preferred to cream and eggs by many persons.



# S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Aug. 15, 1900.

### CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Sept.	Oct.
Wednesday.....	76 @75 1/4	76 3/4 @76 1/4
Thursday.....	75 1/4 @76 1/4	76 1/4 @77 1/4
Friday.....	75 1/4 @76 1/4	76 1/4 @77 1/4
Saturday.....	76 1/4 @75 1/4	77 @76
Monday.....	74 1/4 @75 1/4	75 1/4 @76 1/4
Tuesday.....	75 1/4 @74 1/4	76 1/4 @75 1/4

### LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	Sept.	Dec.
Wednesday.....	6s 1 1/4 d	6s 2 3/4 d
Thursday.....	6s 2 d	6s 3 d
Friday.....	6s 1 1/4 d	6s 2 3/4 d
Saturday.....	6s 1 1/4 d	6s 2 3/4 d
Monday.....	6s 1 1/4 d	6s 3/4 d
Tuesday.....	6s 1 1/4 d	6s 1 1/4 d

### SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec. 1900.	May, 1901.
Thursday.....	1 12 1/4 @1 13	1 18 1/4 @ —
Friday.....	1 12 1/4 @1 13	— @ —
Saturday.....	1 11 1/4 @1 11	1 16 1/4 @1 16 1/4
Monday.....	1 10 1/4 @1 11 1/4	1 15 1/4 @1 16
Tuesday.....	1 11 1/4 @1 11	— @ —
Wednesday.....	1 11 1/4 @1 10 1/4	1 16 1/4 @1 16

### WHEAT.

The wheat market has displayed little life since last review, either at this port or in Eastern and foreign centers, and as is generally the case when trade is slow, there has been an absence of firmness. In the spot or sample market, there were no appreciable declines, but it was mainly due to the absence of selling pressure. Noteworthy quantities could not have been placed without accepting lower figures than were nominally current. Speculative values were close to lowest rates of previous week, with trading in options of a rather slow order most of the time. While the export movement from this center aggregates for the season to date a little heavier than for corresponding time last year, the wheat clearances the current month are considerably lighter than for August, 1899. Five wheat cargoes cleared in August of last year up to the 17th, against only three cargoes thus far this month. The world's shipments of wheat the past week are given at 5,647,000 bushels, as against 6,239,000 for preceding week. The visible supply in the United States east of the Rockies increased the past week 683,000 bushels.

### CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, \$1.13 @1.10 1/2.  
May, 1901, delivery, \$1.18 1/2 @1.15 1/2.  
Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at 1.11 1/2 @1.10 1/2; May, 1901, \$1.16 1/2 @1.16.

California Milling.....\$1 07 1/4 @1 12 1/4  
Cal. No. 1 shipping, alongside.....1 05 @1 06 1/4  
Oregon Valley.....1 05 @1 07 1/4  
Washington Blue Stem.....1 07 1/4 @1 12 1/4  
Washington Club.....1 02 1/4 @1 07 1/4  
Off qualities wheat.....1 00 @1 02 1/4

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-1900.	1900-01.
Liv. quotations.....	6s0d @6s0 1/4 d	6s1d @6s1 1/4 d
Freight rates.....	32 1/4 @—s	37 1/4 @40s
Local market.....	\$1 03 1/2 @1 06 1/4	\$1 05 @1 07 1/4

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

### FLOUR.

There is no change for the better observable, and nothing at the moment to warrant anticipating any pronounced upward movement in values in the immediate future. Not only is business on local account slow, but export trade has been comparatively light for several weeks past. Supplies and offerings are of quite fair proportions, considering the limited inquiry, especially of the product of mills outside the State.

Superfine, lower grades.....	\$2 25 @2 50
Superfine, good to choice.....	2 60 @2 80
Country grades, extras.....	3 15 @3 40
Choice and extra choice.....	3 40 @3 65
Fancy brands, jobbing.....	3 60 @3 75
Oregon, Bakers' extra.....	2 90 @3 25
Washington, Bakers' extra.....	2 90 @3 40

### BARLEY.

Another full cargo of barley has been cleared from this port for Europe since last review, a portion being Chevalier. The market is moderately firm at the prevailing rates for desirable shipping grades of both Chevalier and Brewing, but on Feed descriptions the tendency of the

market has not been especially favorable to sellers. Screenings from the cleaning machines at Port Costa are to a great extent supplying the local demand for feed qualities and are interfering with the sale of low-grade barley.

Feed, No. 1 to choice.....	72 1/4 @ 77 1/4
Feed, fair to good.....	70 @ 72 1/4
Brewing, No. 1 to choice.....	82 1/4 @ 90
Chevalier, No. 1 to choice.....	92 1/4 @ 97 1/4
Chevalier, No. 2.....	80 @ 85
Chevalier, poor.....	75 @ 80

### OATS.

There is no lack of inquiry and offerings are far from heavy. While market is decidedly firm, there is some danger of forcing values to levels which will shut off considerable of the demand. Of this week's clearances, 500 centals of oats for Japan came from the East. The U. S. Government is now buying in Oregon and Washington. Most of the recent purchasing has been by Uncle Sam and Japan.

White Oats, fancy feed.....	1 30 @1 35
White, good to choice.....	1 20 @1 27 1/4
White, poor to fair.....	1 10 @1 17 1/4
Gray, common to choice.....	1 12 1/4 @1 20
Milling.....	1 25 @1 40
Surprise, good to choice.....	1 25 @1 35
Black Russian.....	1 05 @1 20
Red.....	1 07 1/4 @1 25

### CORN.

Market shows steadiness, with stocks of limited volume and in comparatively few hands. Several invoices of Eastern corn have been received, representing mostly prior arrival purchases. Very little domestic product has lately arrived, and not much is expected to come forward in the near future.

Large White, good to choice.....	1 22 1/4 @1 25
Large Yellow.....	1 20 @1 22 1/4
Small Yellow.....	1 50 @ —
Eastern, in bulk (carload lots).....	1 15 @1 17 1/4

### RYE.

There is a fair inquiry for export, but only at low figures, shippers offering 91c for No. 1, Port Costa delivery. Slightly higher figures are obtainable locally, but mainly in a small way.

Good to choice, new.....	92 1/4 @ 97 1/4
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### BUCKWHEAT.

Aside from very small quantities in the hands of local millers, the market is bare of stocks. Owing to the insignificant supplies, values are not well defined.

Good to choice.....	2 00 @2 10
Silverskin.....	— @ —

### BEANS.

Although there is not much doing in beans of any description, and the now season is near at hand, the market cannot be said to be favorable to buyers. Present stocks and offerings are of very moderate volume, and aside from Lady Washingtons, Bayos and Pinks, the display is insignificant. Recent purchasing of Small Whites on Government account has almost exhausted supplies of this variety. Limas are steadily held, with only enough offering locally for a small jobbing trade.

Pea, fair to good, 100 lbs.....	— @ —
Small White, good to choice.....	3 50 @3 75
Lady Washington.....	2 75 @2 90
Butter, small.....	— @ —
Butter, large.....	— @ —
Pinks.....	2 65 @2 85
Bayos, good to choice.....	2 65 @2 85
Reds.....	3 25 @3 75
Red Kidneys.....	— @ —
Limas, good to choice.....	5 25 @5 35
Black-eye Beans.....	3 25 @3 50
Horse Beans.....	1 75 @2 25
Garbanzos, large.....	2 50 @2 75
Garbanzos, small.....	2 00 @2 25

Advices by late mail from New York give the following report of the bean market, prices quoted being per 60-lb. bushel:

Under influences that have been present for more than a month past, prices have continued on the decline and all grades are 5 @10c lower, and still somewhat unsettled. The continuous downward movement has not been from any burdensome supplies, but because trade was exceedingly dull and values were considered dangerously high in view of the large bean crop that is expected in this country this year. Operators have seemed to feel the necessity of working prices downward, especially as no business of importance could be done at the rates previously asked. Choice Marrow have settled to \$2, and are now easily bought at that. Medium dropped 10c, and at the close the choicest marks are weak at \$1.90. Poa have worked downward to \$2.10 for best lots in bbls. and \$2.05 @2.07 1/2 in bags. Early sales of Red Kidney for export were at \$1.95, later at \$1.92 1/2 and then at \$1.90, the latter being the general price at the close, with demand light. White Kidney and Yellow Eyo a little easier, and Turtle Soup are nominally lower. Lima in few hands and held steady; quotable at \$3.52 @3.55. Imported Poa and Medium have been urged to sale even at a sharp cut in prices; quality must be strictly prime to reach outside quotations. Green and Scotch peas in light supply on the spot and slightly firmer; few jobbing sales at \$1.10.

### DRIED PEAS.

Nono offering from first hands, and only small quantities held by local millers. Market is firm at previously quoted range of values.

Green Peas, California.....	2 40 @2 50
Niles Peas.....	2 15 @2 25

### WOOL.

Heavy inroads have been made into the stocks of bright and free wools, suitable for shipment in the grease, by the purchases during the past few weeks of two prominent operators. Market since last review has been more quiet than for a week or two previous, operators being engaged in getting previous purchases in shape for shipment. That there will be any prolonged lull, however, is not anticipated. Values show no weakening, former quotations remaining in force.

### SPRING.

Humboldt and Mendocino.....	16 @18
Northern, free.....	14 @16
Northern, defective.....	11 @13
Middle Counties, free.....	14 @16
Middle Counties, defective.....	11 @13
Southern Mountain, 12 mos.....	8 @10
Southern Mountain, free, 7 mos.....	9 @11
Southern Mountain, defective, 7 mos.....	8 @10
Oregon Valley, fine.....	17 @19
Oregon Valley, coarse to medium.....	16 @17
Eastern Oregon, choice.....	15 @16
Eastern Oregon, fair to good.....	11 @14
Nevada, as to condition.....	14 @16

### FALL.

San Joaquin.....	7 1/2 @10
San Joaquin Lambs.....	8 @9

### HOPS.

There is no evidence of much doing, either in spot stocks or hops to arrive. Supplies in this center are of light volume and include few which can be termed choice. For desirable growths to arrive, the market on contracts is now quotable at 9 @11c., the latter figure being for favorite marks. Owing to the decreased acreage on this coast and in the East, the market should show an improvement over last year, but much will depend on the size and condition of the crop in Europe.

Good to choice, 1899 crop.....	7 @10
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A New York authority furnishes through mail of recent date the following review of the hop market:

Weather conditions of late have been favorable to the growing crop in New York State, and the vines are reported clean of vermin; but with decreased acreage we cannot expect as many hops as were grown last year, and that was a light crop. On the Pacific coast the yards are generally doing well. In some sections of Oregon lice have appeared and farmers are spraying. It is now estimated that this season's crop on the coast will fall 10,000 to 20,000 bales short of last year. Both mail and cable advices from England indicate steady improvement in the plantations under the influence of good weather and faithful washing of the vines; but, under the most favorable conditions for the remainder of the season, it would be impossible to secure as large a yield as last year. On our local market business has moved along steadily and values have been firmly maintained on nearly all grades. Exporters have not been operating, but brewers have needed goods to replenish their stocks, and holders are expecting that a pretty good clearance will be effected by the time of the incoming of the new crop. The government report for the fiscal year ending June 30 shows that the sales of fermented liquors were 39,330,849 barrels—an increase of 2,749,735 barrels over the previous year.

### HAY AND STRAW.

While former quotations for hay are being maintained, and the market shows no particular weakness, especially for best qualities, arrivals have been heavier than the most positive demand warranted, or than were permissible to have a really healthy condition of the hay trade. Straw was in fair request at ruling rates.

Wheat.....	8 00 @12 00
Wheat and Oat.....	8 30 @11 00
Oat.....	7 00 @10 00
Barley.....	5 50 @8 50
Volunteer.....	4 50 @6 50

Alfalfa.....	6 00 @7 50
Stock.....	5 00 @6 50
Compressed.....	8 00 @12 00
Straw, 1/2 bale.....	25 @37 1/2

### MILLSTUFFS.

Most kinds of mill offal were in fair supply for immediate requirements, and market for same was easy without being appreciably lower. Rolled Barley was rather firmly held. Milled Corn remained without quotable change.

Bran, 1/2 ton.....	12 00 @13 00
Middlings.....	15 00 @18 00
Shorts Oregon.....	13 00 @15 00
Barley, Rolled.....	16 50 @17 00
Cornmeal.....	25 00 @25 50
Cracked Corn.....	26 50 @27 00

### SEEDS.

New crop Mustard is being held at about 4 1/2c for choice Yellow and at 3 @3 1/2c

for prime Trieste, but no noteworthy transfers have been thus far reported. In view of the small yield in this State the current season, the asking prices are not unreasonable. Some Flaxseed arrived this week which is supposed to have gone to the oil works on contract.

	Per cth.
Mustard, Trieste.....	3 00 @3 25
Mustard, Yellow.....	1 00 @1 25
Flax.....	2 00 @2 50
	Per lb.
Canary.....	3 1/4 @4
Rape.....	2 @3
Hemp.....	3 1/4 @4
Timothy.....	— @ —
Alfalfa, Utah.....	— @ —

### BAGS AND BAGGING.

The Grain Bag market is weak and quotably lower, with little or nothing doing in this article at present. The quantity absorbed by this year's crop proved smaller than holders generally anticipated. A moderate business is doing in Fruit Sacks at unchanged rates. In market for other Bags and Bagging quoted herewith there is little doing and nothing new to record.

Calcutta Grain Bags, buyer June-July.....	— @ —
Calcutta Grain Bags, spot.....	5 1/2 @6
San Francisco Grain Bags, 22x36, spot.....	6 @6 1/2
State Prison Bags in lots of 2000, 1/2 100.....	5 65 @ —
Wool Sacks, 4 lbs.....	— @32 1/2
Wool Sacks, 3 1/2 lbs.....	— @28 1/2
Fleece Twine.....	7 1/2 @ —
Gunnies.....	— @12 1/2
Bean Bags.....	4 1/2 @5 1/4
Fruit Sacks, cotton.....	6 1/4 @7 1/4

### HIDES, PELTS AND TALLOW.

Market for Hides and Pelts remains quiet, with absence of firmness fully as pronounced as for some weeks preceding. Tallow is not offering in heavy quantity, and values for the same are being fairly well sustained.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	9½	8½
Medium Steers, 48 to 56 lbs.....	8½	7½
Light Steers, under 48 lbs.....	8½	7½
Heavy Cow Hides, over 50 lbs.....	8½	7½
Light Cow Hides, under 50 lbs.....	8½	7½
Wet Salted Klp.....	8½	7½
Wet Salted Veal.....	8½	7½
Wet Salted Calif.....	9	8
Dry Hides.....	15	12
Dry Klp and Veal, 11 to 16 lbs.....	15	12
Dry Calif, under 4 lbs.....	15	12
Salted Horse Hides, large.....	2 00	@ —
Salted Horse Hides medium.....	1 50	@ —
Salted Horse Hides, small.....	1 00	@ —
Dry Horse Hides, large.....	1 50	@ —
Dry Horse Hides, small.....	75	@ 1 00
Dry Colts' Hides.....	50	@ —
Pelts, long wool, ¾ skin.....	1 00	@ 1 25
Pelts, medium, ¾ skin.....	70	@ 90
Pelts, short wool, ¾ skin.....	35	@ 60
Pelts, shearling, ¾ skin.....	20	@ 35
Deer Skins, best summer.....	27½	@ 30
Deer Skins, good medium.....	20	@ 22½
Deer Skins, thin winter.....	—	@ 10
Elk Hides.....	10	@ 12
Tallow, good quality.....	4	@ —
Tallow, No. 2.....	3	@ 3¼
Goat Skins, perfect.....	30	@ 37½
Goat Skins, damaged.....	10	@ 20
Kid Skins.....	5	@ 10

### HONEY.

A very fair inquiry is being experienced for all descriptions, and current values are being tolerably well maintained. Spot supplies are too small to admit of heavy transactions. White sage or equally high grade honey is scarce and is hardly quotable in a regular way.

Extracted, White Liquid.....	7 1/2 @8
Extracted, Light Amber.....	6 1/2 @7 1/4
Extracted, Amber.....	5 1/2 @6
White Comb, 1 lb frames.....	12 @12 1/2
Amber Comb.....	9 @11
Dark Comb.....	6 1/2 @7 1/4

### BEESSWAY.

The previously noted firm condition of the market for this commodity still prevails and is likely to continue throughout the season.

Good to choice, light, 1/2 lb.....	26 @28
Dark.....	24 @25

### LIVE STOCK AND MEATS.

There has been a firmer market for Beef, demand being fair at full current rates. Prices for Mutton and Lamb ruled much as last quoted, with supplies little if any ahead of immediate needs. There was no special shortage of Large Veal, but Small Veal was scarce and market against buyers. Hogs from interior of this State were hardly in sufficient receipt for current needs of butchers, and market was firm, packers being unable to do anything.

Beef, first quality, dressed, net 1/2 lb.....	6 @6 1/4
Beef, second quality.....	5 1/2 @ —
Beef, third quality.....	5 @ —
Mutton—ewes, 7 @7 1/4; wethers.....	7 1/2 @8
Hogs, hard grain fed, medium.....	5 1/2 @6
Hogs, small, fat.....	5 1/2 @6
Hogs, large, hard.....	5 1/2 @ —
Hogs, acorn-fed.....	— @ —
Hogs, feeders.....	5 1/2 @5 1/4
Hogs, country dressed.....	6 @6 1/4



Veal, small, # lb.	8 @ 10
Veal, large, # lb.	8 @ 10
Lamb, spring, # lb.	8 @ 9

## POULTRY.

There has been little change in quotable rates or the general tone of the market since last report. Choice stock, both young and old, was not in heavy receipt and was in fair request at generally unchanged figures for old, but slightly higher figures for young. Poultry in poor condition was not readily moved at lowest prices quoted. Eastern poultry was in tolerably free receipt, and offerings of the same interfered considerably with advantageous sale of domestic product.

Turkeys, dressed, # lb.	— @ —
Turkeys, live hens, # lb.	11 @ 13
Turkeys, live gobblers, # lb.	9 @ 10
Hens, California, # dozen	3 50 @ 5 00
Roosters, old	3 50 @ 4 00
Roosters, young (full-grown)	3 50 @ 5 00
Fryers	3 00 @ 3 50
Broilers, large	3 00 @ 3 50
Broilers, small	2 00 @ 2 50
Ducks, old, # dozen	3 00 @ 4 00
Ducks, young, # dozen	3 00 @ 4 00
Geese, # pair	1 25 @ 1 50
Goslings, # pair	1 50 @ 1 75
Pigeons, old, # dozen	1 50 @ 1 75
Pigeons, young	1 50 @ 1 75

## BUTTER.

Best qualities of creamery and dairy product continued in limited supply, and market remained firm for strictly high-grade stock, but quotable rates were not appreciably changed. Values for cheap grades or cooking stock were well sustained at current quotations. Butter which was too good for pastry but was not choice, was difficult to move at satisfactory figures.

Creamery, extras, # lb.	24 @ 25
Creamery, firsts	22 1/2 @ 23 1/2
Creamery, seconds	21 1/2 @ 22 1/2
Dairy, select	22 1/2 @ —
Dairy, seconds	19 @ 21
Dairy, soft and weedy	— @ —
Mixed store	15 @ 16
Creamery in tubs	20 @ 21
Pickled Roll	19 @ 20
Firkin, California, choice to select	19 @ 21
Firkin, common to fair	17 @ 18

## CHEESE.

Stocks of domestic product are quite liberal for this date. While market is not quotably lower, free sales or large transfers are not possible at extreme figures current. Large or wholesale buyers are restricting bids to 9c for best qualities of flats.

California, fancy flat, new	9 1/2 @ —
California, good to choice	8 1/2 @ 9
California, fair to good	8 @ 8 1/2
California Cheddar	— @ —
California, "Young Americas"	9 1/2 @ 10 1/2

## EGGS.

Firmness has continued to be a leading feature of the market for choice and strictly fresh eggs, in every way suitable for the most exacting custom. Such are in light receipt and will continue to come forward very sparingly for several months to come. Much of the trade at present is on Eastern and cold storage eggs, there being no scarcity of these descriptions.

California, select, large, white and fresh	24 @ —
California, select, irregular color & size	21 @ 23
California, good to choice store	16 @ 19
Eastern, as to section and grading	15 1/2 @ 19
Eastern, cold storage	— @ —

## VEGETABLES.

The general trend of the market for nearly all descriptions now in season has been in favor of the consumer. Onions were rather low, notwithstanding the last China steamer took 4000 crates for Manila. Tomatoes were scarce and high part of the week, but for several days past have been in ample supply. Lima Beans were in light receipt and brought comparatively stiff figures.

Beans, String, # lb.	2 @ 3
Beans, Wax, # lb.	3 @ 5
Beans, Lima, # lb.	4 @ 5
Cabbage, choice garden, # 100	1 00 @ 1 25
Cauliflower, # dozen	50 @ —
Cucumbers, Bay, # box	20 @ 35
Egg Plant, # box	50 @ 75
Garlic, # lb.	2 1/2 @ 3
Green Corn, # sack	50 @ 1 00
Green Corn, Alameda, # crate	1 00 @ 1 50
Onions, Yellow Danver, # cental	60 @ 75
Okra, Green, # box	35 @ 50
Peas, Sweet, garden, # lb.	2 @ 3
Peppers, Green Chile, # box	40 @ 65
Peppers, Bell, # lb.	40 @ 65
Pickle Cucumbers, No. 1, # box	50 @ 75
Pickle Cucumbers, No. 2, # box	40 @ 60
Squash, Summer, # large box	35 @ 50
Tomatoes, River, # large box	30 @ 65

## POTATOES.

An improved shipping demand caused firmer prices to rule. During a portion of the week dealers were unable to promptly fill all shipping orders, spot supplies being inadequate. There is no scarcity of stock, however, at most of the near-by points of production.

Burhanks, River, # cental	40 @ 70
Burhanks, Salinas, # cental	70 @ 1 00
Sweet Potatoes, Yellow, # cental	1 25 @ 1 75

## The Fruit Market.

## FRESH FRUITS.

Market for fresh fruits has presented no especially noteworthy features since last review, having been in the main quiet, with very few changes of moment in quotable rates. Apples were in quite fair supply, but were mostly under choice, while only for select qualities did the market rule firm. Peaches sold at much the same range as previous week, and for desirable qualities for canning or shipping there was no lack of custom at full current rates. Bartlett Pears of high grade were scarce and against buyers, but with the more ordinary qualities the market was fairly glutted. Plums were in sufficiently liberal supply to keep the market quite favorable to buyers. Grapes of nearly all kinds are now represented, and for the ordinary run of offerings the market lacks firmness. Figs of second crop were in moderate receipt and brought fairly good prices. There were no large arrivals of Berries of any sort, neither was the demand brisk at full current figures. Melons of the various sorts now in season were in good supply, but weather most of the time was unfavorable for consumers taking hold freely.

Apples, fancy, 4-tier box	1 00 @ 1 25
Apples, good to choice, # 50-lb box	60 @ 90
Apples, common to fair, # 50-lb box	25 @ 50
Apples, Crah, # box	25 @ 50
Blackberries, # chest	3 50 @ 5 00
Cantaloupes, # crate	75 @ 1 25
Figs, # 1-layer box	25 @ 50
Figs, # 2-layer box	50 @ 75
Grapes, Tokay, # box	40 @ 75
Grapes, Seedless Sultan, # crate	60 @ 75
Grapes, Fontainebleau, # crate	40 @ 65
Grapes, Rose of Peru, # box	40 @ 65
Grapes, Black Hamburg, # box	40 @ 65
Grapes, Muscat, # box	40 @ 65
Raspberries, # chest	5 00 @ 8 00
Logan Berries, # chest	— @ —
Nectarines, Red, # box	40 @ 50
Nectarines, White, # box	35 @ 50
Nutmeg Melons, # crate	35 @ 60
Plums, ordinary varieties, # box	25 @ 40
Plums, fancy, # box	50 @ 65
Prunes, # crate	35 @ 50
Plums, as to size, # ton	7 00 @ 15 00
Peaches, # box	25 @ 50
Peaches, wrapped, # box	60 @ 75
Peaches, Cling, # ton	15 00 @ 22 50
Peaches, Freestone, # ton	15 00 @ 20 00
Pears, Bartlett, # box	40 @ 1 00
Pears, Bartlett, # ton	12 50 @ 20 00
Pears, common kinds, # box	25 @ 65
Strawberries, Longworth, # chest	5 00 @ 8 00
Strawberries, Large, # chest	3 00 @ 5 00
Whortleberries, # lb	4 @ 6
Watermelons, # 100	6 00 @ 15 00

## DRIED FRUITS.

A more encouraging condition of affairs is shown in the market for cured and evaporated fruits than at any previous date since the current season opened. Apricots continue in active request and at a further improvement in quotable values. Most of this year's output of this fruit has already found its way into second hands, and there is no lack of buyers for the Apricots remaining unplaced. Aside from not to exceed twenty-five carloads in the Santa Clara valley, there are practically none remaining in growers' hands in the northern part of the State. As to the quantity in first hands south of Tehachapi, estimates vary, some stating there are probably seventy-five carloads, while others doubt if there is over a third of above quantity now unplaced. But whether there are twenty-five or seventy-five carloads, the existing demand will as readily absorb the larger quantity as the smaller and at full current rates. It is somewhat gratifying in this connection to assert that these columns have not been prostituted to attempt to make producers believe that the market would be glutted with this fruit. We contended at the beginning of the season that prices were low, and for all desirable qualities were more likely to advance than to recede. The market for Peaches is inclining in favor of the producing interest, with a very fair inquiry and offerings much lighter than was generally anticipated would be the case at this date. Pears promise to be in fairly liberal supply, and market in consequence is not noteworthy for firmness, unless for strictly choice to fancy, but offerings up to date have not proven very heavy. Pitted Plums have thus far been in only very moderate receipt, and choice to select qualities have not lacked for attention at full current rates. Apples are not in heavy spot supply, but demand is limited and mainly on local account; the market presents an easy tone. We have no advances of the prices of new Prunes; old are nearly out of stock and in a small way are selling for comparatively stiff figures, 60-70's commanding 4 1/2c and 40-50's 5 1/2c.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime	6 1/2 @ —
Apricots, Royal, choice, in sacks, # lb.	7 1/2 @ 8
Apricots, Royal, fancy	9 @ —
Apricots, Moorpark	10 @ 11
Apples, in 50-lb boxes, rings, pressed, fancy	5 1/4 @ 5 1/2
Apples, 50-lb boxes, rings, pressed, good to choice	4 @ 4 1/2

Figs, White, fancy pressed	5 1/2 @ 5 1/2
Nectarines, # lb	5 @ 6
Peaches, unpeeled, fancy	6 1/2 @ 7 1/2
Peaches, unpeeled, choice	5 1/2 @ 6
Peaches, peeled, in boxes	12 @ 15
Pears, unpeeled Bartletts, halved, fancy	7 1/2 @ 8
Pears, halved, unpeeled Bartletts	5 1/2 @ 6 1/2
Pears, quartered, unpeeled Bartletts	5 @ 6
Plums, Black, pitted	5 1/2 @ 6 1/2
Plums, White and Red	6 1/2 @ 7 1/2
Prunes, in sacks, 40-50s	4 1/2 @ 4 1/2
50-60s	— @ —
60-70s	— @ —
70-80s	— @ —
Prunes in boxes, 1/2c higher for 25-lb boxes, 1/2c higher for 50-lb boxes	— @ —
Prunes, Silver	4 1/2 @ 6

## COMMON SUN-DRIED.

Apples, sliced	3 @ 3 1/2
Apples, quartered	3 1/2 @ 4 1/2
Figs, Black	2 @ 3
Figs, White	3 @ 3 1/2
Peaches, unpeeled	4 1/2 @ 5

Recent advices by mail from New York City furnish the following report of the dried fruit market:

There has been little change in spot evaporated apples; demand has been light and the little business reported within former range of prices. The low rates current on futures of late have stimulated speculators and increased demand has caused makers to strengthen their ideas considerably; prices are fully 1/4c higher than a week ago, sales having been made at 4 1/2c for October, November or December delivery, and some fruit is held higher. Very few sun-dried apples available, but not many wanted. Chops continue dull and nominal; prime offering at \$1 without attracting attention. Cores and skins have had a moderate inquiry and tone firm, though some defective stock obtainable very low. Small fruits are still in limited supply, and with only scattering sales reported, values have been more or less nominal and not well established. Old raspberries are practically cleaned up and no new arriving; last sales of old at 15 1/2 @ 16c. New huckleberries inquired for and salable at 12c, possibly higher. Blackberries have had small sales at 5 @ 6c, though latter figure rather extreme. A few cherries sold at 9 1/2c, but inquiries for them lead us to believe that 10c could be realized. First Georgia peaches reported in transit and samples here have drawn bids of 8c; stock will probably open considerably higher than that. California apricots have ruled firm and advancing on the coast and market stronger here in sympathy, with best stock in either bags or cases held at 8 1/2c—in fact, some holders will not consider that figure. California peaches quiet, but there is a fair inquiry for prunes at late prices.

Apricots, Cal., 1900, # lb.	7 1/2 @ 8 1/2
Peaches, Cal., unpeeled, in bxs, # lb.	7 @ 8
Peaches, Cal., unpeeled, in bags, # lb.	6 @ 7 1/2
Prunes, Cal., # lb.	4 1/2 @ 6 1/2

## RAISINS.

Last year's raisins are still receiving some attention in a small way, but are in too light stock to warrant quoting. The first of this season's pack will be soon ready for market, but the prices at which they will be floated have not yet been announced.

## CITRUS FRUITS.

The market for Lemons shows much the same condition as last noted, values ruling fairly steady, more from absence of undue selling pressure than through any noteworthy activity in demand. Limes are without appreciable change in quotable rates. Demand is only moderate, but stocks are not particularly cumbersome.

Oranges—Navels, fancy # box	— @ —
Navels, good to choice	— @ —
Navels, common to fair	— @ —
Valencias	1 50 @ 3 00
St. Michaels	1 50 @ 2 75
Mediterranean Sweet	1 50 @ 2 50
California Seedlings	— @ —
Lemons—California, select, # box	4 00 @ —
California, good to choice	3 00 @ 3 50
California, common to fair	1 50 @ 2 50
Limes—Mexican, # box	6 00 @ 7 00
California, small box	— @ —

## NUTS.

Almonds of current crop are mostly out of first hands and market is strong at prevailing figures. Values for new crop Walnuts have not yet been established, but prospects are favorable for best qualities selling to very fair advantage.

California Almonds, shelled	22 1/2 @ 25
California Almonds, paper shell, # lb.	12 1/2 @ 13 1/2
California Almonds, soft shell	10 @ 11
California Almonds, hard shell	6 @ 7
Walnuts, White, soft shell	— @ —
Walnuts, White, California, standard	— @ —
Chestnuts, California Italian	— @ —
Peanuts, California, fair to prime	5 @ 6
Peanuts, Eastern, hand-picked	6 @ 6 1/2
Pine Nuts	5 @ 6

## WINE.

Little doing in a wholesale way in Wine and no changes to record in quotable values, which are 14 @ 16c. per gallon wholesale for dry wines of 1899 vintage, and 17 @ 20c. for small lots, latter figure being possible even in a small way for only high grade stock. Wine presses are re-

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ported already in operation on this year's grapes, with \$16 per ton being paid at Fresno for white varieties of sweet wine grapes, and \$18 per ton for red wine grapes. At Santa Rosa the current figure for red wine grapes is said to be \$22 per ton. The Santa Rosa grapes yield about 160 gallons per ton, as against about only 120 gallons for the Fresno product. Receipts of wine at this port in July were 966,700 gallons, showing an increase of 159,500 gallons, as compared with July, 1899.

## California Dried Fruit at New York.

NEW YORK, Aug. 15.—Evaporated apples, common, 3 1/2 @ 4 1/2c; prime wire tray, 4 1/2 @ 5 1/2c; choice, 5 1/2 @ 6c; fancy, 6 1/2 @ 7c.

California dried fruits.—Market firm for Apricots; steady for Peaches and Prunes; latter in light stock.

Prunes, 3 1/2 @ 7c.  
Apricots, Royal, 11 @ 14c; Moorpark, 15 @ 17c.  
Peaches, unpeeled, 6 @ 9c; peeled, 14 @ 18c.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, 1/4 sacks	87,264	652,647
Wheat, centals	20,495	684,913
Barley, centals	257,566	610,675
Oats, centals	28,460	115,418
Corn, centals	2,540	6,857
Rye, centals	25	4,205
Beans, sacks	3,570	17,602
Potatoes, sacks	23,157	141,024
Onions, sacks	4,747	21,356
Hay, tons	4,278	26,767
Wool, bales	458	3,288
Hops, bales	98	200

## EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, 1/4 sacks	44,864	359,540
Wheat, centals	27,570	678,072
Barley, centals	192,633	256,908
Oats, centals	11,007	21,967
Corn, centals	—	2,206
Beans, sacks	417	3,079
Hay, bales	—	165
Wool, pounds	—	233,621
Hops, pounds	281	7,383
Honey, cases	76	166
Potatoes, packages	524	2,139



## FORESTRY.

## Some Facts About Para Rubber.

It is reported that a new rubber producing area in the Amazon section, South America, recently discovered and as yet untouched, is larger than that now being worked. The State of Para produces about two-thirds of the rubber shipped from the port of that name, the remainder coming from the States of Amazonas, Peru and Bolivia.

The rubber tree in appearance resembles the English ash. It grows to a height of more than 60 feet. The leaves are trifoliate. Rubber trees thrive the best on islands and low ground near the rivers, where the banks are inundated. Ground that is above water at all times, or that has no drainage, is not suitable. The peculiarity of the rubber tree, the "hevea," is that it will not grow satisfactorily on cleared or open ground. It requires the shade of other trees and still air from the time its growth begins until it becomes an adult tree. Without these conditions the supply of milk or sap is much affected. The hevea requires about fifteen years to mature.

The area known to produce Para rubber amounts to 1,500,000 square miles. It is believed that further exploration will show that this area is underestimated. On the river Acre, one of the tributaries of the river Purus, 200 trees yield as much as 3 tons of rubber a year. Great quantities of hevea are known to exist on the banks of the Japura, but that territory has not yet been opened.

It was at one time imagined that the excellence of Para rubber was largely due to the kind of fuel used in curing it. In the Amazon region the fuel used in a clay funnel consists generally of the nuts of certain palms. The reason these nuts are selected is because they emit a continuous dense smoke and are more portable than other obtainable fuel. The palms that furnish the fuel were at one time transplanted in Africa, with a view of making Para rubber there. The experiment was unsuccessful. When none of the palms is accessible bark and twigs are used as fuel.

All workmen in the forest carry a wood knife, the blade of which is 26 inches long and 2 inches broad. One of its principal uses is to cut the fuel for the preparation of rubber. Owing to the damp climate, the blades are electroplated to prevent their becoming rusty before they are marketed. The knives, which resemble the Cuban machete, are all imported from the United States. The rubber collector carries a small ax to chip a smooth surface on the bark before attaching a cup to the tree. The handling of the ax requires skill in order not to injure the bark. A smooth surface is made to prevent impurities mixing with the sap. The cups are clay or tin. The former are attached to the bark by means of a little clay. Their weight, however, makes them inconvenient to carry when the trees to be tapped are far apart. The collector then prefers to carry tin cups. They easily penetrate the bark by means of the sharp edges and hold to the tree without the use of clay. The use of the tin cup, however, is said to be injurious to the tree.

Part of the collector's outfit consists of a light gourd—large enough to carry the contents of from

500 to 700 cups. A clay bowl is next required to receive the contents of the gourd, of sufficient size to contain the product of several days' work before it is cured. The calabash tree provides calabashes, which are employed to ladle the milk from the clay bowl into the mold. A broad-bladed wooden paddle is used as a mold and is made locally. This completes the outfit for the rubber collector.

The collector has to use his knife to cut his way through the undergrowth, and also to cut down a sapling occasionally to bridge a rivulet. At times he is knee-deep in ooze or up to his waist in water. On arrival at a rubber tree, he chips away the rough parts of the bark, makes a more or less smooth surface, attaches a cup, and makes a small gash above for the sap to fall into the cup, and repeats this process in a line around the tree until he has attached six or seven cups. Then he proceeds to the next tree and does the same. He continues this process until he has tapped from 75 to 150 trees, which can be done in a day if they are not too far apart. On the following days the gashes in the trees are made a trifle lower down than the first ones. Some collectors tap the trees in the morning and return to collect the sap in the evening, whereas others tap in the evening and collect in the morning. An expert gathers seven pounds daily in the lower Amazon; in the upper Amazon three times this amount is collected.

When the accumulation of rubber is sufficient—usually in three or four days—the collector lights a fire in the hut he has erected, places the funnel over a fire, pours a thin coat of milk over the paddle and holds it over the smoke to coagulate. The process is repeated until a large cake has been formed. To release the paddle from the cake it is necessary to make a slit on one side. The paddle mold makes a cake of uniform and even shape, and is in general use in the State of Para. In other parts, a spit is placed on two upright forked sticks and given a rotary motion. By this means the rubber is cured with greater ease. Paddle smoked rubber is preferred, as it is drier and seemingly more carefully cured.

Many attempts have been made to introduce improved curing apparatus. Up to this writing, however, they have not been received with popular favor, because the common method, although very primitive, possesses the advantages of being simple and inexpensive. The process of curing rubber is extremely injurious to the eyes. Many cases of total blindness result therefrom.

There are three grades of Para rubber, viz.: fine, medium and coarse. If rubber is not uniform and contains impurities, it is classified as medium. The coarse quality, or "Sernamby," consists of scraps that have not been cured.

Insufficient labor is the most serious difficulty in the rubber industry. It would scarcely seem advisable to invest money in rubber estates, unless the owner first can see his way clear to obtain sufficient labor with which to collect the rubber. In reality, the genuine owner of the produce of the forest is the collector, not the landowner.

As a rule, the landowner makes advances to the collectors for their outfit, food, etc., and in return receives the rubber collected by them. He sells the produce on the collector's account, retaining 20% for himself, and continues making advances in such manner that the collector always remains in his debt and

consequently in his service. It frequently happens, however, that the collector takes the advance and fraudulently disposes of the rubber to any buyer who may be on hand. A great deal of leakage occurs in this way, and no method of preventing it is in successful practice. This is another of the difficulties of the landed proprietor. One of the methods in practice is to lease the trees in lots of 75, 150 or 200 at a given sum per annum, and to stipulate that the lessee should sell the rubber and purchase all his supplies from the owner. The lessee works his lot to the utmost, and usually earns a handsome profit after paying the rent, and, although the owner does not obtain the full value of the lots rented, he makes up for it by charging commission on goods supplied, etc.

The profits of the rubber industry would seem to be large, because the employer keeps 20% and makes about the same on the goods supplied the employees; but it must be considered that out of 100 employees, whose outfit and traveling expenses have been advanced, at least 75 die, desert, or return to their homes on account of illness. The expense incurred for them is accordingly a dead loss, and when this is deducted from the total income the profit is greatly reduced.

The "aviador" is a person who advances supplies and capital to the rubber collector in exchange for rubber. The principal "aviador" resides at the chief centers, and finances a number of small "aviadores," who travel about in the rubber industries. The exporters of rubber are mostly agents of United States and British importers. They buy from the "aviadores" in the principal centers.

THE results of measurements of various rivers and the observations of height have been published by the U. S. G. S., in a series of "Water Supply" papers, Nos. 35 to 39, inclusive, arbitrary division into five parts being necessary by the requirements of law limiting these papers to 100 pages each. They are as follows: No. 35 (Part I), "Rivers Flowing Into the Atlantic Ocean From Maine to Virginia;" No. 36 (Part II), "Rivers Flowing Into the Atlantic South of Virginia;" No. 37 (Part III), "Rivers Flowing From the Eastern Rocky Mountain Area;" No. 38 (Part IV), "Rivers Tributary to the Colorado, the Interior Basin and Columbia River;" No. 39 (Part V), "California Streams and Rating Tables." Application for these papers should be made to Members of Congress, by whom 4000 copies of the 5000 printed are distributed, or to the Director U. S. Geological Survey, Washington, D. C.

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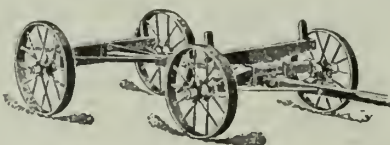
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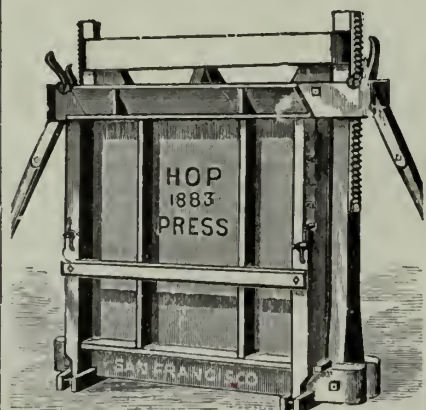
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## FRUIT MARKETING.

### The Orange County Walnut Crop.

For six or seven years past there has appeared in the walnut orchards of Orange county something in the nature of a blight which is proving a puzzle to everyone. The Santa Ana Blade says it comes and goes mysteriously, giving no clew to its origin nor any indication of where it will appear next. It does not spread over the orchard uniformly, as some trees will be almost entirely free from it, while their nearest neighbors may lose half of their fruit. Again, the disease is seldom the same two years in succession, as the healthiest tree in the orchard this year may have the disease worst of all next year. So, taken altogether, this blight is able to give the walnut men plenty of cause for anxiety and sleepless nights.

The first appearance of the disease in the orchard is heralded by the formation of black spots on the hull of the green fruit, and in a short time the walnuts thus affected drop to the ground. On cutting into the nut it is found that the black spots on the outside extend clear through shell and meat in many instances. In other cases half of the shell and meat are rotted, while the other half is sound. At any rate, the appearance of the black spot generally dooms the nut in that particular instance. The same effect is noticed on foliage of the diseased trees, the leaves becoming spotted and brown, often completely drying up.

L. B. Fine pointed out that of his own trees those which had received the most water, on account of that part of the land being lower than the other and the waste accumulating there, showed the greatest ravages of the disease. On the other hand, the trees in the higher part of the orchard had not received so much water, and these were only slightly attacked. Mr. Fine gave it as his opinion that from 10% to 20% of the crop would be lost this year.

M. Nisson would advance no theory whatever as to the probable cause of the disease, and agrees with every one else that there is no way of checking it in the least. He asserts that about one-third of the entire crop will succumb this year. Mr. Nisson has experimented a great deal on methods of stopping the disease and, together with Prof. N. B. Price of the local government station, has expended much study and work on remedies. He states that nothing that has ever been tried has done the slightest good or affected the disease in any way, and many of the sprays used have materially injured the trees and interfered with their growth.

George W. Minter thinks the blight is entirely due to climatic conditions during the early winter when, by reason of abnormally warm weather, the sap in all deciduous trees started before its time and was subsequently checked by a cold snap, and this sap had soured and caused the blight now complained of.

J. N. Smith gave it as his opinion that anywhere from 15% to 20% of the crop would be lost this season from this cause. Mr. Smith believes it due to the abnormal flowing of the sap in the early part of the winter, which, when checked by the subsequent cold weather, had soured. Mr. Smith points out the fact that those trees that came into foliage latest bear sound nuts, while the earlier leafing trees are those on which the blight is found.

It seems, then, that there is no im-

mediate remedy which can be depended upon or expected to affect the disease which prevails throughout the county to a greater or less degree. A portion of the crop is already lost for this year, and more is sure to follow. What the conditions will be next year remains to be seen, as a prediction in that line is the merest guesswork, on account of the fact that never yet has the fungus appeared to exactly the same extent any two years in succession.

Sizing up the situation from a common sense standpoint, it looks as though the trouble might be largely remedied, if not entirely averted another year, by pruning away any partially blighted new growth.

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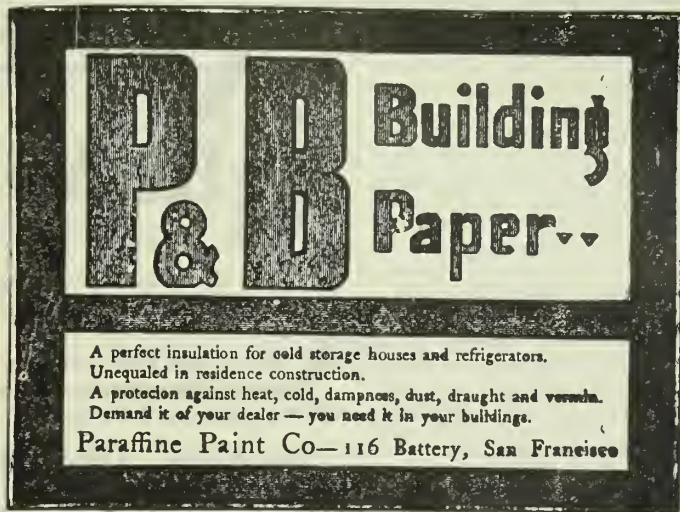
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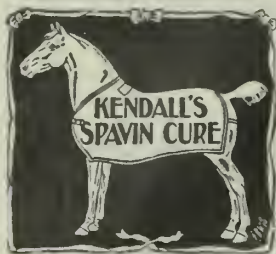
The Best in Use!

Emery Wheels, Grindstones, Files, Saws,

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**HAS NO EQUAL**  
For  
**Spavins,  
Ringbone  
Splints,  
Curbs,  
and all forms of  
Lameness,  
bunches or bony  
enlargements.**

Uvalde, Texas, Nov. 12, 1898.  
Gentlemen—Enclosed find a two-cent stamp for which please send me your "Treatise on the Horse and his Diseases." Your Spavin Cure is simply wonderful. Resp'y. P. S. GREAVES.  
As a liniment for family use it has no equal. Price \$1; six for \$5. Ask your druggist for Kendall's Spavin Cure; also "A Treatise on the Horse," the book free, or address DR. B. J. KENDALL CO., ENDSBURG FALLS, VT.

#### Suggestions on Handling Lemons.

The Southern California Fruit Exchange has forwarded to the exchanges and associations a copy of a letter from Mr. Scott Way, a successful lemon grower of Cucamonga. There is much of interest to lemon growers, hence we make the following extracts:

I have endeavored to always have my lemons handled carefully. I never pick immediately after a rain, an irrigation or a north wind. The boxes are kept in the shade as the picking proceeds, covered by an empty box as soon as filled, and removed to the lemon house at the end of the day.

I pick in the ordinary picking box, with a slat at each end, and pile them six or seven high in the lemon house, allowing them to remain thus about two or three weeks for fall or winter cut lemons. I then transfer carefully to boxes without slats, putting a sheet of newspaper between each layer and a double sheet on top. All long stems are cut close before this transfer. The boxes are again stacked six or seven high and a sheet of canvas thrown over the pile. My fruit is not again disturbed until it is gone over preparatory to taking to the packing house.

My lemon house is an inexpensive one, 18x36, and 10 feet high to ceiling. It has only a 4-inch space between the outer and inner walls and no way of ventilating this space. Between the ceiling and roof, however, there is an air space with ventilator always open at each gable and two openings, 2x3 each, in ceiling. These are rarely closed. A large door at each end of the house is kept open at night and during cloudy days, but closed whenever there is sunshine. Unlike other lemon houses in this colony, my house is set on piers and has a free circulation of air beneath the floor. I think that this will be a great advantage during wet weather.

It is not a very cool house. During hot days the mercury sometimes reaches 90°, but it cools very quickly when the doors are thrown open at sundown. During the three years I have held winter lemons I have had very little decay and no wilted fruit whatever.

I would only add not to pick during or immediately after a norther, or while your fruit is damp from rain or fog. Do not let the fruit set out in the sun. Haul on easy springs during the cooler part of the day, and, when hauling to packing house, cover the fruit with canvas.

In conclusion, if you are a lemon grower and haven't it naturally, cultivate a "capacity for taking great pains."

It is not commonly known what causes the crackling or snapping of burning wood. This is merely an expansion of the air particles in the pores of the wood which is brought on by the increase of the temperature. The expanding of the air bursts the covering in which it is confined.

#### How's This?

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Toledo, O.  
We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by him.

WEST & TRAUX, Wholesale Druggists, Toledo, O.  
WALDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Testimonials sent free. Price 75c. per bottle. Sold by all Druggists.  
Hall's Family Pills are the best.

## THE VETERINARIAN.

Answers by Dr. Creely.

#### TREATMENT FOR MANGY HORSE.

TO THE EDITOR:—I have a horse that has mites or mange. I have washed him thoroughly and used an ointment of lard, sulphur and carbolic acid, also coal oil, and, lastly, I am using tobacco wash; but none of them do any good. Will you please prescribe in the PACIFIC RURAL PRESS? The horse's neck is partially bare, the hair broken or rubbed off, and hide is swollen and lies in welts or ridges. He has had the ailment a long time.—SUBSCRIBER, Wadsworth, Nevada.

Apply the following: Creoline, 2 ozs.; oil cake, 2 ozs.; oil eucalyptus, 1 draehm; oil olive, 4 ozs. Mix and apply once daily; after two weeks report.  
DR. CREELY.

510 Golden Gate Ave., S. F., Cal.

**MICA**  
Makes short roads.  
**AXLE**  
And light loads.  
**GREASE**  
Good for everything  
that runs on wheels.  
Sold Everywhere.  
Made by STANDARD OIL CO.

## Breeders' Directory.

### HORSES AND CATTLE.

**HOLSTEINS**—Winners over Jerseys of EVERY butter contest at State Fairs for last six years. Aged, 4-yr., 3-yr. and 2-yr.-old classes, except 1st on 2-yr.-old in 1898. Last year every butter prize awarded won by my herd, except 2nd for 2-yr.-olds, 21 Jerseys and Durhams competing. F. H. Burke, 626 Market St., S. F.

**1 AYRSHIRE BULL, 2 AYRSHIRE HEIFERS**, registered, most fashionable strains; price, \$260.00. 1 Standard-Bred Nutwood Stallion, disposition perfect; price \$250.00. Owner going away. A. W. Canfield, Elmhurst, Cal.

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**JERSEYS, HOLSTEINS & DURHAMS**. Bred specially for use in Dairy. Thoroughbred Hogs, Poultry. William Niles & Co., Los Angeles, Cal. Breeders and Exporters. Established 1876.

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**CREAM SEPARATORS**  
**ALWAYS THE BEST.**  
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Before the advent of the FULTON PUMP it was considered not only impractical but impossible to irrigate successfully from deep-bored wells, but after five years' trial it is admitted by all users of the FULTON PUMP to be not only the cheapest but the surest way to irrigate.

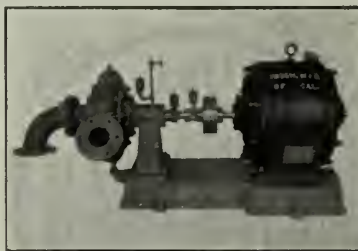


Pumping Plant of John Bolinger, San Jose, Cal. Note the smile on this honest old German's face. He thinks he has the best system on earth.

### READ WHAT MR. C. S. LOMBARD HAS TO SAY ABOUT HIS PUMP.

REDLANDS, CAL., February 12, 1900.  
Mr. A. T. Ames, Galt, Cal.—DEAR SIR: After using your No. 2 Power Head for nearly two years, during which time I have critically examined everything in the way of a Deep Well Pump in this part of the State, I feel it my duty to state that, in my opinion, you make the best Deep Well Pump now upon the market for deep pumping. For irrigating purposes your No. 2 and No. 3 have no equal.  
Respectfully yours,  
C. S. LOMBARD.

Manufactured at Galt, Sacramento Co., Cal., by A. T. AMES.



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For IRRIGATION and RECLAMATION.

Capacity up to 100,000 gallons per minute.

They are made Horizontal and Vertical and Direct Connected to Steam or Electric Power.

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## THE LYNWOOD HERD OF SWINE

has been pretty well cleaned out of salable pigs and we have but a few young litters on hand. Our stock is now being put into show condition and we cordially invite every visitor to the State Fair to call at our pens and see the kind of stock we keep. It has always been one of the sights of the Fair and we hope to improve on former exhibits.

In answer to inquiries we will describe any stock we think will suit you.  
**SESSIONS & CO., 117 E. 23rd St., Los Angeles, Cal.**



"WHAT FOOLS THESE MORTALS BE"—Puck.

to pay \$40 to \$60 for a Steel Range that does not cost over \$12 at the Factory to build, the difference being profits and expenses of an Army of middlemen. Such folly no longer necessary, as we offer our

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at one-half agents prices. Guaranteed for 5 years. Money refunded if not entirely satisfactory. Send for Big Free Catalogue of Sewing Machines, Buggies at Old Prices, Harness, Lawn Swings \$8.75, and 1000 other things at half dealers prices. Reference this paper. Have your bank look us up. Address

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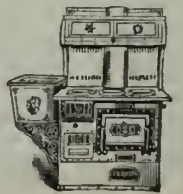
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**TRIUMPH STEEL RANGE** into every section of the United States,

we will for a short time deliver at your spot fires of charge our highest grade Steel ranges for \$25.00. The regular retail price is \$50.00. It has six 8-inch lids. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21½ inches deep, and 15-gallon reservoir. Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet.

Best Range made. **WM. G. WILLARD, Manufacturer, 619 N. Fourth St., St. Louis, Mo.** Will ship C. O. D. with privilege of examination.





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First—Best—Cheapest. All Styles—Sizes.  
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Save \$10.- per cow per year. Send for Catalogue.  
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CHICAGO. | NEW YORK.  
103-105 MISSION STREET,  
SAN FRANCISCO, CAL.

### FRUIT PRESERVATION.

#### Caution in Using Glass Fruit Jars.

TO THE EDITOR:—A serious word of caution in the use of the popular Mason fruit jars should be spoken to all who use that make of jar. Those now manufactured are simply not safe to use, but dangerous in the extreme unless carefully examined and finished off by all who buy them.

On the inside of these jars, round the top of the rim, they are often imperfect, the mould in which they are cast leaving narrow and sharp edges projecting from the rim. These projections are often such mere films that one can break them off with a little pressure of the thumb; and sometimes they are not such mere films, either. In many a jar I have bought this summer, or examined in stores or at the houses of friends, I have in this way dislodged fragments of glass sometimes 1/4 inch long and half as thick as a pin. Now, a spoon striking this inner rim is quite likely to break them off, and the great danger from this source of serious harm to the body is apparent at a glance. The remedy is easy: Use a small file and go over this part carefully, afterwards rinsing the interior thoroughly. If a file cannot be obtained use coarse sandpaper, which will doubtless remove all pieces liable to flake off. But use something. With a little care all possible danger can be annihilated; without it—well, somebody is going to suffer. At least half the jars I bought or examined this season needed such treatment. C. P. NETTLETON.  
Haywards.

In Norway, Sweden and Finland women are frequently employed as sailors, and do their work excellently; and in Denmark several women are employed afloat as State officials, generally in the pilot service. They go far out to sea in their boats to meet the vessels coming into port, and, having nimbly

climbed on board and shown their official diploma, they calmly and coolly steer the newcomer into harbor.

ELECTRIC RAILWAYS in most large cities develop newer and suburban sections at the expense of older settled districts; more especially is this the case in that part of a city which is too near the business center to be valuable for residence purposes, and, at the same time, too remote from the business centers to be of value for business purposes. Such property is the worst kind to own as an investment proposition, and the most dangerous upon which to loan money, as there is no guide in establishing its market value.

THE degree of virtue any one possesses is best manifested in times of adversity. Trials do not cause human frailty, but they serve to display what a man really is.—Thomas a Kempis.

**Everybody Knows About**


## **Pain-Killer**

**A Household Medicine**

A Safe and Sure Cure for  
**Cramps Coughs Bruises**  
**Diarrhoea Colds Burns**  
**Sprains and Strains.**

Gives instant relief.  
Two sizes, 25c. and 50c.

Only one Pain Killer, **Perry Davis'.**



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Havana (Ill.) Metal Wheel Co.

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Notary Public and Commissioner of Deeds,  
316 MONTGOMERY STREET,  
Bet. California and Pine, SAN FRANCISCO, CAL.

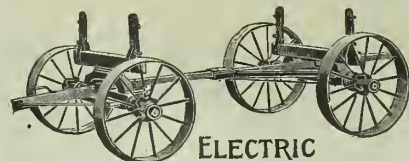
### List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
PIONEER PATENT SOLICITORS  
FOR PACIFIC COAST.

FOR THE WEEK ENDING JULY 31, 1900.

- 654,824.—PUMPS—J. M. D. Bland, Baker City, Or.  
654,872.—HYDRAULIC MOTOR—E. F. Casel, Seattle, Wash.  
654,712.—DOMESTIC BOILER—A. Cerruti, S. F.  
654,950.—BICYCLE SUPPORT—H. H. Coote, Phoenix, Ariz.  
654,617.—TAMPING ROLLER—J. W. Fitzgerald, Kern, Cal.  
654,652.—HAME FASTENER—Lake & Sims, Loyalton, Cal.  
654,802.—STUMP PULLER—T. H. McCain, Monroe, Wash.  
654,838.—GOLD SOLVENT—D. Mosher, S. F.  
654,839.—GRAPE CRUSHER AND STEMMER—J. S. Philpott, Windsor, Cal.  
654,675.—COFFEE POT—Elvina Root, Coquille, Or.  
655,021.—SPRING—E. A. Seaburg, Seattle, Wash.

July 9, 1900.  
Dr. S. A. Tuttle, 27 Beverly St., Boston, Mass.  
DEAR SIR:—I have used Tuttle's Elixir for the last four years and I can heartily say that I would rather have one bottle of Tuttle's Elixir than ten gallons of any other wash I ever saw or used, and I have used them all. It does not burn the coat, and I never saw a horse come out sore from a hard race, if used according to directions; and besides being a good body wash, it has no equal for thrush, colic, rheumatism, or any ailments that horse or man is subject to. I cheerfully recommend it to all brother drivers. Once used, always used. I am never without a dozen bottles of it, winter or summer. Yours, etc., B. T. BIRNEY.  
55 Hoffman St., Elmira, N. Y.



"The Wheels of Progress."

Now that a political campaign is on, one may expect to hear a good deal from the speil-hinders about the "wheels of progress." One cannot always be sure what the political orator thinks he means, but if he is really interested in the "wheels of progress" he can note the Handy low down farm wagons which have the wheels of progress. The manufacturers say that one man with a "Handy" will do nearly as much work as two men with a high wagon. The broad tires of the "Handy" prevent rutting, and roll easily over ground where a narrow-tired wagon would mire. The Handy wagon with broad tires has come to stay. The leaders in their manufacture are the Electric Wheel Co. of Quincy, Ill. They make also, low steel wheels, with any width tire, to fit any wagon. Send for descriptive catalogue and prices and find how cheaply you can get a set of wheels for your old wagon.

## Feeds and Feeding.

By W. A. HENRY.

This is a practical, thorough and complete work based on what has been done: a record of solid facts.  
Every Feeder, Breeder or Farmer should have it for every-day reference

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NEW EDITION (3rd)

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Professor Agricultural Practice University of California; Author of "California Vegetables in Garden and Field;" President California State Floral Society; Horticultural Editor Pacific Rural Press of San Francisco.

Large Octavo; 470 Pages; Profusely Illustrated, 12 Full-Page Plates.

The third edition of this great work and indispensable companion of progressive fruit growers is now ready for immediate delivery.  
The book has been practically rewritten by the author, and contains the latest and best methods of practice on the subjects of which it treats.

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## GREATEST RACE MEETING IN THE STATE.

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**Fancy Cattle, Horses, Swine and Sheep.**

The Pick of the World. Come and see the highest types of animal life.

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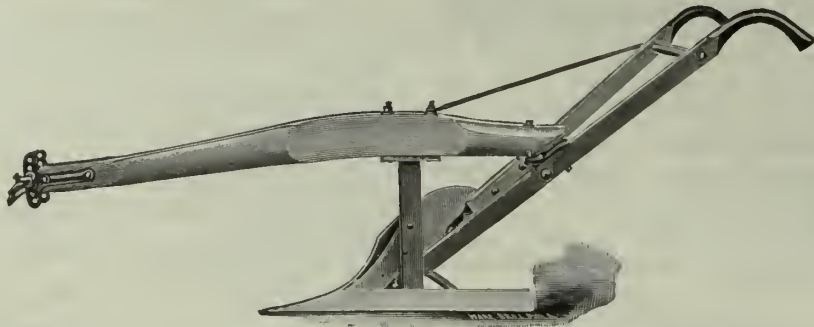
PETER J. SHIELDS, Secretary.

A. B. SPRECKELS, President.



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**BENICIA AGRICULTURAL WORKS,**  
BENICIA, CAL.NEW IMPLEMENTSAT  
NEW PRICES  
FOR  
**1900.**HARVESTING MACHINERY

...AND...

HAY TOOLS.SINGLE  
ROAD  
SULKY  
GANG  
DISC**PLOWS!**

STEEL AND CHILLED.

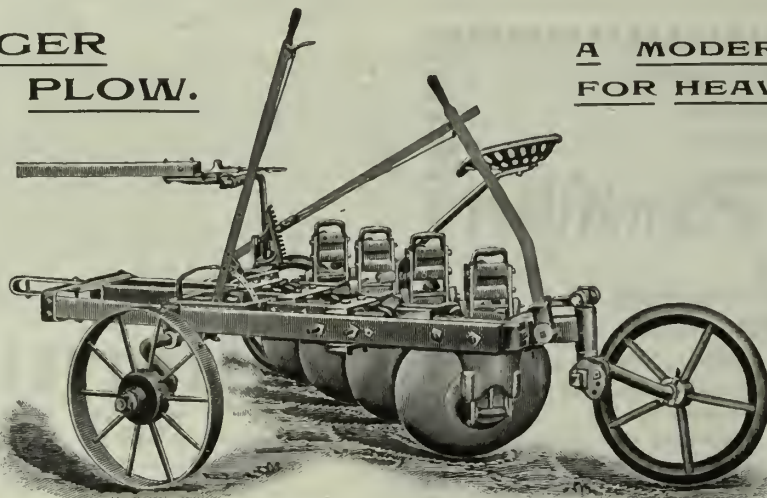
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TIGER PLOWS ALWAYS SCOUR.

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HARDER THE SOIL BETTER THE WORK.

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FOR HEAVY WORK.CUTS, PULVERIZES AND  
COVERS PERFECTLY ALWAYS.

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SAVES ONE HARROWING.

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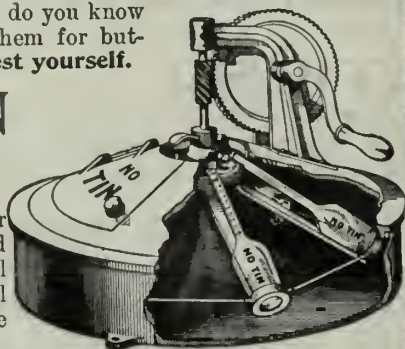
**REMEMBER** ♦♦♦ THE DATES OF THE ♦♦♦ **REMEMBER**\*\*\*\*\* **SAN FRANCISCO AND SAN MATEO** \*\*\*\*\***...FAIR...**September 24  
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how much? Have you tested them for but-  
ter fat? You can make the test yourself.**The NO-TIN  
Tester**is made in six-bottle size for  
farmer's use; it is driven by hand  
and is substantially built. Will  
last a life-time; fitted with ball  
bearings, and it does not rattle  
and does not wear out.It uses the ordinary Babcock bottle and it does accurate work.  
Send now for our Catalogue, No. 70.**ELGIN MANUFACTURING CO., Elgin, Illinois.****Tanks!**When you buy a Water Tank get one that  
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COSTS NO MORE THAN COMMON.**SILOS and TANK WORK of every description.**  
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35 BEALE STREET,.....SAN FRANCISCO.  
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We have 'em with STEEL Wheels, 4-inch Tires, and with WOODEN Wheels, 6-inch Tires.

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SPECIAL LARGE DISCOUNT OFF LIST. WRITE OR CALL.

**ALLISON, NEFF & CO., 222 Mission St., San Francisco**



# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

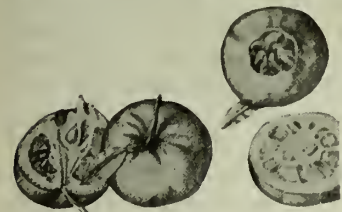
Vol. LX. No. 8.

SAN FRANCISCO, SATURDAY, AUGUST 25, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

### The Navel Orange.

Nearly 240 years ago a German botanist, who wrote a ten-volume book treatise on the natural history of trees and fruits, made a picture of a Navel orange, of which we have a reproduction herewith, which B. M. Lelong secured for his report on citrus culture in California, to which we alluded in our issue of August 11. This old record shows that the proliferation or superfetation by which the orange first placed one fruit around another on the same stem was accomplished long ago and has been done many times, and that the varieties resulting from that freaky growth differ considerably in characters.



Navel Orange in 1662.

The Navel orange which has made California famous in citrus lines and constitutes the bulk of our product came from Bahia in Brazil. It was secured thence by William Saunders, the veteran horticulturist of the Department of Agriculture at Washington, in 1870. He propagated a number of plants by budding and gave two of these to Mrs. L. C. Tibbetts, in 1873, to bring to her new home in the budding colony which has since become the great city and county of Riverside, in southern California. Mr. and Mrs. Tibbetts planted these two plants beside their cottage and they grew well and bore prolifically. The distinctive character, and excel-



Mrs. and Mr. L. C. Tibbetts of Riverside.



Cluster of Washington Navel Oranges Reduced in Size, as the Picture Shows.

lence of the fruit was soon recognized and made widely known at the citrus fairs which were so popular at the arising of the great citrus interest of to-day and served such an excellent educational purpose in the upbuilding of that interest. At first a strong effort was made to call the fruit "Riverside Navel," but its rapid spread into rival localities compelled the adoption of a wider name and it became the "Wash-



William Saunders, Washington.



Variations of Form in the Navel Orange



The Original Trees at Riverside, California.

ington Navel," in recognition and in honor of the nation's capital.

The engravings on this page, which are from Mr. Lelong's excellent monograph, are suggestive of the history and character of the variety. The wide range of its superfetation is seen in one picture which shows first, the secondary orange wholly external to its primary, and second, the secondary fruit wholly enclosed in its primary. The Washington Navel, as grown in California, is a grand fruit in all respects. If it had a little longer season, it would be almost exclusively grown. The only rivals it has at the present time are those which come to maturity before or after it, and along these lines alone does the California planter seek other varieties.



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E. J. WICKSON..... Horticultural Editor.

San Francisco, August 25, 1900.

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## The Week.

The weather is seasonable again and good for the important fruit and field crops which are still to be gathered. Great activity prevails, and, fortunately, there seems to be sufficient help available as the floating laboring population passes rapidly from one engagement to another. Soon the season will be practically over and there will be plenty of time for the arduous political duties which a presidential year places upon all American citizens. Foreign affairs are less exciting now that the white people are rescued from the Chinese capital, and diplomacy will probably settle things in its deliberate way. For this reason there will be all the more disposition to save the country at the ballot box, and, judging by the outcries of the political journals, it needs saving just as badly as it ever did in the past.

Speculative wheat tumbled after our last report, but has returned to the starting point. Spot wheat is also what it was a week ago, though it has been lower between times. Very little is actually being done in wheat now—only minor parts of two cargoes going out and the greater parts of the same cargoes being barley. Barley is still the favorite, more barley than wheat having been shipped during August thus far. Barley is fairly steady for brewing and Chevalier, but feed barley is depressed by the amount offering of screenings which has been taken out of good feed barley to raise it to shipping grade. Oats are quiet, but no lower, the advance being checked by the fact that the Government seems to have enough white oats for the present; but still holders of white oats are firm. Corn is steady. Millstuffs are unchanged, with fair supplies and moderate demand. There is a good demand for the better grades of hay, although receipts are large enough to swamp an ordinary demand. One thousand bales went to Japan Tuesday and a German transport is here loading hay and horses for China. Beef and mutton are steady and unchanged. Hogs bring full figures for immediate use. There is no packing and no Eastern hogs here. The supply is local and from adjacent States and Territories. Small veal is still scarce. Special brands of choice butter are firm, but there is no general advance because of the

packed and cold-storage butter which is coming out. Cheese has a better tone, as some heavy holders are strengthening the market all they can. Receipts are light. Eggs are quiet; the hot weather this week is not favorable. However, though many Eastern are coming, fine fresh eggs are selling tolerably well. Potatoes and onions have a little lower range, but large business is being done, including heavy shipments to Manila. A few are going to Australia, but prices are too high for such speculation. Large and small white beans are stiffly held, as the Government still wants them. Other beans are quiet. Canning fruits are selling well. Lemons and limes are lower and there is complaint of quality of both. Dried peaches are active, Eastern and local buyers competing for them. Prune prices are expected by the end of the week. Shell almonds are stiff and walnuts have been selling freely at prices to be fixed later. Wool is quiet and sales small, but there are no large stocks here and they are held firmly. Honey is in light supply and strong. There is a good inquiry for new hops, and while prices are not high they are better than last year.

## In the Name of the Profit—Figs.

It looks as though the man who has figs this year would be fortunate in the possession. Two years ago there was a shortage in the Smyrna crop and California dried figs were very high and profitable. Even the White Adriatic, which is a very poor imitation of the fig of commerce, sold high, and for a few months the unpopularity and unprofitability of the fig were sharply arrested, and those who had seriously thought of chopping out all their fig trees stopped to take breath. In view of the high prices of 1898 there arose a desire to proceed with planting figs again, but when it became generally known that the profitability of the dried White Adriatic was not based upon its popularity, but because Smyrna figs could not be had in adequate quantities, owing to a temporary decline in the Smyrna product, the disposition to increase the acreage of that variety faded away.

Now comes another chance for high selling anything we have in the shape of a white dried fig. It is announced this week that the Secretary of the Treasury has issued an order prohibiting the importation from Smyrna of figs, raisins and merchandise, on account of the possible danger of introducing the plague. The shipment of this season's figs and raisins from Smyrna was about to begin when the United States Consul in that country received his instructions.

This is likely to give us another rush on dried fig prices just like that which followed the failure of the Smyrna crop to which we have alluded. It will also help the raisin market. The importations of raisins and figs into the United States for the fiscal year ending June 30th were as follows: Raisins, 4,933,201 pounds, valued at the port of export at \$232,400; figs, 7,284,058 pounds, valued at \$356,762.

But failures of the Smyrna crop or the occurrence of the plague are only accidents in our favor, and not proper surety for efforts to increase our production of the old and unsatisfactory varieties, which can only sell well in the absence of competition. Fortunately we have a better outlook and the chance of meeting the Smyrna fig in a fair and square competition, in which California can expect to succeed as she has succeeded in excluding the Spanish raisins and the French prunes, and as she is at present doing with the French wines. The present extreme touchiness of the French Exposition people over admitting California wines to fair competitive trial seems to be largely attributable to the fact that our wines are so actively supplanting theirs in the Eastern States, and their exports to this country are rapidly falling off. To succeed with figs, however, we must have a product as good as our raisins, prunes and wines, and that has not been attainable hitherto.

Readers of the PACIFIC RURAL PRESS already know all the steps of the prolonged effort to secure the true fig of commerce and to realize its production in this State. We have already shown that this has been practically accomplished by the work of the Agricultural Department at Washington in introducing the coprifizing insect to Fresno county. We have seen this week samples demonstrating the realization of what seems alone to be needful to give us a satisfactory drying fig. The letter of Mr. George

C. Roeding of Fresno, which is published upon another page, conveys important information on the subject. We have not only secured the drying fig of Smyrna, but several of the Smyrna varieties which fruit alone by the aid of the fig insect, and probably we shall have at the Fruit Growers' Convention in this city in December a full exhibit of the dried product which will show California's success in this line.

We regard this matter of great horticultural importance to the State. It will give localities with proper soils and climates for fig drying possession of an industry which they have long anticipated, but never realized hitherto. Though fig prophets have been many and fluent for two decades fig profits have been scant. It looks now as if the latter might be abundantly realized.

THERE promises to be a very large display of live stock at the State Fair this year. Mr. Sparks has had it all his own way with Herefords for several years. This year D. S. Cone of Red Bluff and James Whittaker of Galt propose to contend strongly with him, and both have recent importations of the highest class. There will be some interest in judging Herefords this year surely. Shorthorns will come from Nevada from Joseph Marzen's herd to try to win the palm from California breeders. Frank H. Burke has some new Eastern purchases of Holsteins which he will add to his already famous animals to maintain his prestige with the black and white kind. Jerseys will be in fine array. Henry Pierce, W. S. Hobart, Peter J. Shields, C. V. Osborne and Mrs. S. J. McFarland will all have good herds and the contest will be merry for the awards. A Guernsey herd is also promised. The judging this year will be in the latest scientific lines, and all stockmen will have a chance to compare their standards with the experts. The whole stock show promises to be unusually interesting and valuable.

A NATIONAL organization of agriculturists which should be brought to California for one of its national sessions is the "Farmers' Congress," which is holding its twentieth session in Colorado this week. It seems to be fairly national in its character and to be broad in its views and purposes. In the names of men mentioned as participating in the opening session we find representatives of the whole region east of the Sierra Nevada. There should be California representation and participation in its councils, and then we could probably secure a chance to show the whole body our interest and hospitality. We have no doubt our railways would facilitate the bringing of such a body of men to our coast as they have in similar movements in the past. It is necessary, however, for our agriculturists who have the means and leisure to identify themselves with such progressive movements in order to extend the glad hand effectively.

GRAPE AND RAISIN AFFAIRS seem to be warming up. It is reported that buyers are looking sharply for lots of Sultanas and Standard raisins which are outside of the Association, and are buying what they can find at prices quite in advance of last year's rates. Buyers of wine grapes are also moving around quite fast and prices are high. It appears clear now that the grape crop will be short and the outlook for prices of both wines and raisins will be good. The Raisin Association is moving and is expected to make its announcement of prices high and quite in sympathy with the general conditions which are seen to exist. The grape growers will make some money this year, even though the crop may be but moderate.

PRUNE PRICES will soon be fixed by the Association. The crop is being secured in fair shape, although there was last week too much dull air and low temperature. It is better this week. Estimates of the total product are very wide. Leading packers are said to estimate the crop of the State at 150,000,000 pounds for this year, some going as high as 175,000,000. Growers are more conservative in estimates and place the State's yield at from 125,000,000 to 135,000,000 pounds. We incline to the smaller figures. It is very easy to overestimate a crop and it is not desirable to do it.

"NEXT WINTER will be the wettest of any for twenty years in California," is the prophecy of California coasting captains, which will not be objected to by California farmers.



QUERIES AND REPLIES.

Beans, Diabroticas and Celery.

TO THE EDITOR:—There is a small bug exactly like the so-called ladybug in our potato and bean fields. It eats leaves and stems of the potato plants and destroys the bean flower. It bores holes into the bean pods. Altogether it causes considerable loss on both plants. We had the same bugs two years ago, but in smaller quantities. Are there any remedies or precautions for the future? I am raising some 500 acres of beans and potatoes annually, but should these pests increase I should be forced to abandon the cultures. I heard about the raising of celery on the peat lands in Los Angeles county. Where could I get information about this new branch of farming?—ISLAND RANCHER, San Joaquin.

The insect of which you write is the diabrotica sessor. It looks like a ladybug except that it is green. No members of the ladybug family are green. The diabrotica is hard to kill. We are not aware that anyone has yet found a satisfactory treatment for it. Fortunately, it is not usually abundant year after year, and may be very scarce next year.

A full account of celery growing is given in our book on "California Vegetables." The crop is often very profitable, but it requires correct work and a good deal of it, and arrangements should be made beforehand for shipping East. It is not a crop which a man could take up in a new locality and count on finding a buyer when it is ready. A contract should be made with an experienced shipper before starting in.

Grafting and Horse Power.

TO THE EDITOR:—Is it practicable to graft peaches onto almond trees that are ten years old or over? Will peaches do well on almonds at all? Is the horse power known in machinery equal to the power of an ordinary horse, or, in other words, will four horses hitched to a sweep do the work of a 4 H. P. engine?—SUBSCRIBER, Winters.

The peach usually works well on the almond. We should graft in the limbs all around and not cut back to the trunk. The old framework of the tree can be saved and the smaller cuts above are more readily grown over.

The term horse power in machinery refers to a standard which is the power required to lift 33,000 pounds at the rate of one foot per minute. Webster says the power of an average draft horse is about four-fifths of a standard horse power. As to whether four horses attached to a sweep will do the work of a 4 H. P. engine, can only be determined by experiment. Much depends upon the character of the mechanism through which the horse power is to be rendered effective.

Caustic Potash or Caustic Soda.

TO THE EDITOR:—When I went to buy my supply of Greenbank caustic soda for prune dipping, I was told that it would be better to use Greenbank potash instead, as it gives the prune a darker color. Will the potash act like soda in cutting the skin, etc.?—PRUNE GROWER.

Potash is a better horticultural alkali than soda. It was used long before soda for this purpose and is the traditional material in connection with European fruit dipping, olive pickling, etc. It is also of greater horticultural account because the waste potash is a good fertilizer, while plants have little or no use for soda. So far as caustic action in skin cleaning and cracking, it is similar to soda. Just how it compares with soda in prune processing and what its special effects are, if any, are not yet fully demonstrated. The Greenbank real potash, 100% pure, is being tried this year by a considerable number of prune growers and this season's work will probably give decisive data.

Crab Grass in the Wrong Place.

TO THE EDITOR:—I am sending you a sample of grass which has appeared on my lawn. It seems to spread rapidly and I fear will become troublesome. Please inform me of the easiest and best method to clear the lawn of the same.—SUBSCRIBER, Napa county.

The grass has something of the appearance and manner of growth of Bermuda grass, but it is probably much less of a pest than that plant. Mr. Davy of the University identifies the specimen for us as Panicum sanguinale, or "crab grass." It is an annual, and therefore prevention of seeding will quickly reduce it, while the Bermuda grass grows perennially from its roots and is almost, if not quite, ineradicable.

Unless the lawn is too large or the crab grass plants too numerous, we should try systematic hand pulling of the roots to prevent seeding. Crab grass has some standing as a dry land forage and hay plant, but it is a great nuisance in the cotton fields at the South.

Melilotus and Lotus.

TO THE EDITOR:—I send two plants that are growing and spreading to a considerable extent in my pasture along a creek, and I hope they may prove to be good forage plants, as they are green in the late summer, when all other feed is dried up. Will you please tell me about them, their names and probable value?—D. J. BROWN, Napa.

One of the plants is yellow sweet clover (melilotus officinalis). It is counted a great pest in grain fields because it imparts its rank odor to the wheat, much to the horror of the bakers. It has to be rogued out of the fields in the interior valley or the wheat will have to go at a less price. At the same time it has standing as a honey plant, and we note that the American Bee Journal congratulates itself that it has secured a small lot of seed, etc. Any one sowing such seed near the grain fields of the interior valley would be counted a public enemy. It is not counted of value as a forage plant, though stock might eat it on a pinch.

The other plant is a legume (Lotus Americanus), which was commented upon on this page in the PACIFIC RURAL PRESS of Aug. 11th. It is valuable as a forage plant late in the season, as our correspondent thinks.

Almond Districts.

TO THE EDITOR:—Will you kindly inform me where the principal almond sections of the State are?—ANDREW GAMBLE, Stockton.

According to the estimates of this year's crop made by the experts, the product this year was apportioned by carloads as follows: Chico and North 25, Biggs and vicinity 50, Yuba City district 20, Woodland 10, Davisville 15, Dixon 5, Capay 5, Winters and Vacaville 5, Suisun 25, Antelope and Grangeville 10, Lodi 15, Stockton 5, San Joaquin valley 10, Brentwood and vicinity 30, other parts of Contra Costa county 10, Alameda county 15, Santa Clara county 20, southern California 10, scattering 15. We do not know just how this stands as a report of the product, but it will serve to approximately designate the chief producing regions.

Those Persian Grapes.

TO THE EDITOR:—In your issue of Dec. 11, 1897, you gave a list of some choice table grapes from Persia which were being distributed by the Agricultural Station of the University of California. Are they to be obtained now from any nurseryman or private grower? If so, I would feel greatly obliged for the name and address of a likely grower, as I am anxious to buy some of the varieties.—HARRY S. LAND, Newtown, Sydney, Australia.

Some of the varieties proved inferior, others no better than similar varieties from the west of Europe already grown here. A few seem to have valuable characters in early ripening and striking form and color. We presume some of our nursery readers can furnish the best of them, and they may correspond directly with Mr. Land.

Dehorning.

TO THE EDITOR:—I have two cows I wish to dehorn. I do not want to go to any unnecessary expense to do it, as I shall not have any others to dehorn. What would be the results to just saw them off, or please advise me the most simple method?—SUBSCRIBER, Salida.

Arrange to hold the head so that it can not be moved, then take a sharp, fine-toothed saw, like a butcher's saw, and saw the horns off as close to the head as possible without wounding the skin and flesh at the base of the horn. Put on a little fine tar to repel flies.

Grapes and Tomatoes for Fowls.

TO THE EDITOR:—Is it true, as often stated, that feeding grapes or tomatoes to laying hens will diminish the supply of eggs?—READER, San Luis Obispo.

We have no idea that these things are harmful to hens. In our practice we have fed them freely to yarded fowls and have also had to protect both vines and fruits from stray fowls, and have never had any trouble with their laying. Our observation is that

fowls with proper allowance of other foods will only eat enough fruit or vegetables to furnish them a desirable amount of succulent element in their diet. Of course to expect yarded fowls to do well on these things as a sole food would result in disappointment, and while fruits may serve well for variety, alfalfa with grain is better than fruit and grain.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending August 20, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

COAST AND BAY SECTIONS.

Cool, pleasant weather has prevailed during the week, and conditions have been favorable for late crops. Fruit picking and drying have progressed rapidly. Some sections report a large crop of prunes, while in others the yield is very light, owing to late spring frosts; throughout the district the yield will probably be nearly average. Other deciduous fruits are yielding nearly average crops. Grapes are ripening early and will yield a large crop. Corn is looking well. Potatoes in some sections are yielding a light crop. Hops are backward and the yield will be light. Grain harvest is nearly completed; the yield and quality are below average. Pasturage is plentiful.

SACRAMENTO VALLEY.

The weather has continued abnormally cool during the week and has been favorable for growing fruit, but has retarded drying. The prune crop is being gathered; the yield is quite heavy, but the fruit mostly of small size. Pears and peaches are nearly all gathered and have yielded good crops. Fig picking and curing are in progress. There is a large crop of grapes, excellent in quality. Oranges and olives are in good condition, and it is reported that the yield will be about average. The almond crop is larger than anticipated. Hop picking is progressing. Grain harvest is completed, except in a few scattered localities. All reports state that the yield is much below average.

SAN JOAQUIN VALLEY.

The weather during the past week has been clear, with exceptionally cool nights for this season of the year. These conditions have slightly retarded the ripening of fruit and grapes. Fruit drying and canning are progressing. Reports from the fruit crop are generally encouraging; although in some localities the quantity of peaches fell below expectations, the quality in these sections was excellent. The pear crop will be large and of excellent quality. Shipment of dried fruit has begun. The grape crop will fall short of the average. Grapes are slow in coloring, owing to the cool weather. A few wineries have commenced crushing and all of them expect to begin next week. Alfalfa crop is generally good. Fruit is being shipped to market in quantities to satisfy all demands.

SOUTHERN CALIFORNIA.

Cool weather has continued during the week, with clear days and cloudy or foggy nights. Walnuts are improving, and the loss through dropping will be light. In some localities grapes are ripening prematurely, and are inferior in quality; other sections report raisin grapes in excellent condition, and prospects good for a large crop. The water supply is failing and the lack of moisture is shown in trees and pasture. Large shipments of lemons are still being made from San Diego. Small fruits are abundant in some places. Oranges are doing well.

LOS ANGELES SUMMARY.—Week cool, with occasional fog and threatening in places. Beet sugar factories have commenced work, with quite good prospects in some sections. Raisin grapes are maturing fast; picking begins soon.

EUREKA SUMMARY.—In many localities thrashing is completed; the grain crop is more of a failure than anticipated. Potatoes have improved somewhat. Apples, plums and pears are very promising. Grub worms continue doing damage.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Aug. 22, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall to Same Date Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Minimum Temperature for the Week.....	Maximum Temperature for the Week.....
Eureka.....	.00	T	.49	.15	48	62
Red Bluff.....	.00	.04	.02	.03	58	93
Sacramento.....	.00	T	.02	.02	53	93
San Francisco.....	.00	T	.00	.04	53	93
Fresno.....	.00	T	.00	.04	51	93
Independence.....	.00	.07	.08	.08	52	88
San Luis Obispo.....	T	T	.04	.04	52	80
Los Angeles.....	T	T	.01	.06	53	80
San Diego.....	T	T	.07	.01	60	70
Yuma.....	.00	.02	.06	.43	64	100

SAN FRANCISCO'S normal annual rainfall is 23.4 inches. Fluctuations have occurred between a rainfall of 7.4 inches in 1850-51 and 49.2 inches in 1861-62. The variations in the winter rainfall are due to the changes in the positions of the lines upon and along which the areas of low pressure originate and move in their course from the North Pacific ocean into the interior of the continent.



## HORTICULTURE.

### A Careful Account of Pear Blight.

In parts of California where this trouble has shown itself, and, fortunately, they are not many, the following explicit account of pear blight by Dr. B. T. Galloway, Chief of the Division of Vegetable Physiology and Pathology of the Department of Agriculture, will be read with much interest. In pear orchards where the disease is unknown it should be always looked for, and the grower will be glad to know what to look for. It is now just the season of the year to make a thorough search for it.

**WHAT THE BLIGHT IS.**—Pear blight is a contagious bacterial disease of the pear and allied fruit trees. It attacks and rapidly kills the blossoms, young fruits and new twig growth, runs down in the living bark to the larger limbs and thence to the trunk. While the bacteria themselves rarely kill the leaves, at most only occasionally attacking the stems and midribs of the youngest ones, all the foliage on the blighted branches must, of course, eventually die. The leaves usually succumb in from one to two weeks after the branch on which they grow is killed, but remain attached and are the most striking and prominent feature of the disease.

**How it Acts.**—The most important parts of the tree killed by the blight are the inner bark and cambium layer of the limbs and trunk. Of course, when the bark of a limb is killed, the whole limb soon dies, but where the limb is simply girdled by the disease, it may send out leaves again the next season and then die. All the parts of the tree below the blight are healthy, no more injury resulting to the unaffected parts of the tree than if the blighted parts had been killed by fire or girdling.

**THE CAUSE.**—The blight is caused by a very minute microbe of the class Bacteria. This microbe was discovered by Prof. T. J. Burrill in 1879 and is known to science as *Bacillus amylovorus*. The following are the principal proofs that it caused the disease:

1. The microbes are found in immense numbers in freshly blighted twigs.
2. They can be taken from an affected tree and cultivated in pure cultures, and in this way can be kept for months at a time.
3. By inoculating a suitable healthy tree with these cultures the disease is produced.
4. In a tree so inoculated the microbes are again found in abundance.

**TREATMENT.**—The treatment of the disease may be classed under two heads:

1. Methods which aim to put the tree in a condition to resist blight or to render it less liable to the disease.
2. Methods for exterminating the microbe itself, which is of first importance, for, if carried out fully, there can be no blight.

The methods under the first head must, unfortunately, be directed more or less to checking the growth of the tree, and, therefore, are undesirable, except in cases where it is thought that the blight will eventually get beyond control of the orchard. Under the head of cultural methods which favor or hinder pear blight, as the case may be, the most important are pruning, fertilizing, cultivation and irrigation; but details in regard to these need not be given here, as the main reliance must be placed in the only really satisfactory method of controlling the disease: that is the extermination of the microbes which cause it. Every particle of blight should be cut out and burned while the trees are dormant, not a single active case being allowed to survive the winter in the orchard or within half a mile or so from it. Every tree of the pome family, including the apple, pear, quince, Siberian crab apple, wild crab apple, the mountain ash, service berry, and all the species of *Crataegus*, or hawthornes, should be examined for this purpose, the blight being the same in all.

**CUTTING OUT BLIGHT.**—The orchardist should not stop short of absolute destruction of every case, for a few overlooked may go a long way toward undoing all his work. Cutting out the blight may be done at any time in the winter or spring up to the period when growth begins. The best time, however, is undoubtedly in the fall, when the foliage is still on the trees, and the contrast between that on the blighted and that on the healthy is so great that it is an easy matter to find all the blight. It is important to cut out blight whenever it is found, even in the growing season. At that time of year, however, it can not be hoped to make much headway against the disease, as new cases constantly occur which are sufficiently developed to be seen when the cutting is done. In orchards where there are only a few trees and the owner has sufficient time to go over them daily, he will be able to save some which would otherwise be lost. However, when the trees stop forming new wood, the campaign should begin in earnest.

**EXAMINATIONS FOR BLIGHT.**—Of course, the greater part of the blight can be taken out the first time the trees are gone over. If this should be in midsummer, the trees should be all again carefully inspected in the autumn, just before the leaves shed, so as to get every case that can be seen at that time. After this

a careful watch should be kept on the trees, and at least one more careful inspection given in spring before the blossoms open. It would, doubtless, be well to look the trees over several times during the winter, to be certain that the blight is completely exterminated. In order to do the inspecting thoroughly it is necessary to go from tree to tree down the row, or, in the case of large trees, to walk up on one side of the row and down the other, as in simply walking through the orchard it is impossible to be certain that every case of blight has been cut out.

The above line of treatment will be even more efficacious in keeping unaffected orchards free from the blight. A careful inspection of all pomaceous trees should be made two or three times during the summer, and a sharp outlook kept for the first appearance of the blight. It usually takes two or three years for the disease in an orchard to develop into a serious epidemic, but the early removal of the first cases will prevent this and save a great deal of labor later and many valuable trees.

### Smyrna Figs from Mr. Roeding.

**TO THE EDITOR:**—I send samples of Smyrna figs, which I trust will arrive in good condition. These figs are, in my opinion, the same as the genuine Smyrna fig of commerce. In addition to this variety, I have also six other varieties, three of which are mixed through my Smyrna fig orchard, all the cuttings having been received in the year 1886.

The drying of the figs has already commenced, and will probably progress very rapidly next week if the weather becomes warmer. The unusual cool weather which we have been experiencing has been retarding the maturing of the fruits.

My orchard is composed mostly of the variety of fig sent you to-day. I will endeavor to send you samples of the other varieties, as you no doubt would be interested in seeing them. Three of them are named, the other three are without names and I doubt very much if the three named ones are correct. All these varieties require caprification. Among the odd varieties named there is one that is almost black; it will probably come nearer being purple than black. You will observe that the seeds in the figs sent you are almost twice the size of the seeds in ordinary varieties of figs and that the skin is very thin and delicate. I am sorry that I could not send you riper fruits, as you then would be able to determine the remarkable richness of this fig as compared with other varieties. All who have sampled the figs pronounce them as excelling in flavor any fig they had ever eaten before.

I am pleased to state that the blastophaga continues to go on propagating and that three generations have already made their appearance, with every indication that there will be a fourth generation just the same as we had last year. Mr. E. A. Schwarz, the U. S. Government Entomologist, expressed his grave doubts when he came here as to their being four generations of the insect, as this was at variance with all the reports on this subject in Europe, but he now admits that it must be a fact.

Fresno, Aug. 15. GEO. C. ROEDING.

These figs are very interesting as a demonstration of the fact that caprification is the secret of success with the Smyrna fig, also that the caprifying agent is duly installed in California, as we have described at length in former issues. It would seem to be established that we can now proceed with fig growing with the Smyrna fig and get the true character of the fig of commerce in our product. Mr. Roeding is fortunate in having such a collection of varieties which succeed by the caprification route, and we expect that he will be kept pretty busy in the near future in the distribution of the trees and the insects.

### Gunning to Prevent Hail.

In the PACIFIC RURAL PRESS of Feb. 17th last a description was given of an Italian method of shooting cannons into the air toward clouds supposed to yield hail, and thus preventing such destructive downfalls. John C. Covert, U. S. Consul at Lyons, writes to the State Department of an effort being made in a section of France to dissipate hail storms by firing cannon at the clouds. Fifty-two cannon, manned by 104 cannoneers and their chiefs, have been distributed over an area of 2500 acres of rich vine land. For the expense of the experiment the Government appropriated \$386, the Department Council \$289, the National French Agricultural Society and a number of wealthy wine growers added \$2316 and furnished fourteen more cannon. The Minister of War supplied powder for 2½ cents per pound.

A high point in the vine land to be covered by the experiments was selected at the central post of observation and a signal code adopted. When a shot is heard from the central post all the cannon are fired, at first twice per minute; more slowly after the first ten shots. I translate the report of the first firing at the storm clouds this season: "The farmers of Denice were aroused at 1:30 o'clock on the night of June 5-6. The storm was very severe. The artillerymen, from forty to fifty strong, fired their guns and

stopped the thunder and lightning. In the neighboring communes the people saw columns of flame rise 300 feet above the cannon when the shots were fired. At several places women recharged the cartridges."

The wine growers are organizing to attack the hail storms in many of the great wine growing regions of France. The two experiments thus far reported are pronounced successful. A writer in one of the wine growers' organs writes: "The results obtained from these experiments are such that organizations will be established at once in all the places that have heretofore been ravaged by hail."

I am told that the practice of shooting at the clouds was known in France over 100 years ago, and that it originated in Italy. It is to be more extensively carried on this year than ever before.

### The French Grow Weary of the Olive.

Consul Skinner of Marseilles, under date of July 3, writes to the State Department in regard to the outlook for the olive crop in France. The impression prevails, he says, that the crop will be a disappointment this year, as it was last. The annual production in that department is about 300,000 quintals of 220 pounds each. Meager reports from Spain, Italy, Tunis and Algeria point to much the same yield as last year. Consul Skinner adds:

French farmers are disposed to abandon the cultivation of olive groves, as in recent years the prices for the oil have not been satisfactory. It is true that there was a sharp advance last year, due to a shortage in the crop; but the highest prices reached, ranging about 36 cents per kilogram (2.2046 pounds) for best French oil, were low as compared with old-time prices, which held firm at 50 cents per kilogram. Because of this fact and the discovery that other articles can be grown with greater profit, the acreage devoted to olives is annually becoming less in this region, and my attention has been called within the past few days to the uprooting of 40,000 trees during the last six months in this department alone. Spain and Italy, with cheaper land and cheaper labor, and more particularly Tunis and Algeria, are offering a competition too severe for southern France. The French colonies last named are especially adapted to the successful prosecution of the business, and it is carried on across the Mediterranean upon a very large scale. It is doubtful if olive oil will ever recover its old-time place, as many vegetable oils, notably American cottonseed oil, are being produced in increased quantities from year to year and are gaining in the estimation of the public.

Pure olive oil for edible purposes is at present practically unknown in any important market, and if it were offered for sale it is doubtful whether it would be accepted by the public, except as an inferior article, as the average consumer at the present time prefers the neutralized taste of a mixture of the olive and vegetable oils, and would mistake the fruity flavor of the pure juice of the olive for the adulterated product.

For some domestic purposes, and particularly for frying vegetables, arachide oil—or peanut oil, as we call it—is considered, even in France, the home of the olive, superior to any other product.

### Against the Peach Borer.

Deep planting for peaches is recommended by a Missouri farmer who tells the Orange Judd Farmer that in planting an orchard seventeen years ago he set the trees 4 inches lower than they grew in the nursery rows. They were never attacked with yellows, although the disease was common in the neighborhood on trees that were planted shallow. To protect against borers he made a hollow cylinder 8 inches in diameter and 1 foot high, which was slipped over the tree and filled with coal ashes and cinders and then withdrawn. Strips of tin 5x10 inches were bent around the tree and pressed into the soil outside the cinders, projecting 2 or 3 inches above the surface of the ground. These were filled with fine cinders like gravel and well firmed around the tree. After planting the land was sown to clover, which was cut every year and left on the ground as a mulch. The trees in this orchard have always been healthy, long lived and borne large crops of fine fruit.

### Peach Growing in Georgia.

California peach growers certainly escape some of the troubles of the Georgia grower. I. J. Hale recently wrote to the Fruitman's Guide what some of these troubles are. He says: "When I wrote you last week Elbertas were just well under way; weather was fine and all prospects were favorable, when along came a shower that settled into a steady rain, and kept it up for two days and nights. It stopped picking entirely in many orchards, and greatly retarded work in the others, but, worst of all, started a very rapid spread of brown rot, that in four days wiped out from 35% to 50% of all the Elbertas in this section. A good many orchardists closed up yesterday, and many more will to-day, altogether a very disappointing season to many. Rot in the early fruit was bad enough, but to lose so many of the Elbertas was unexpected."



## THE POULTRY YARD.

### Seasonable Suggestions.

TO THE EDITOR:—At this season of the year old fowls and early hatched young are or should be in the moult. At this trying period of a fowl's life care should be exercised in both their feeding and housing. The process nature uses in providing fowls with a new dress, discarding the old, is a great tax upon the system. Nourishing food and plenty of it, the eradication of all insect pests and warm quarters should be furnished. Then there need be little trouble regarding the welfare of the birds.

Several weeks elapse after moulting commences before it is completed. It seems a long time to the poultry keeper, but if the fowls are well cared for they will amply repay all needed attention and loss of time. The more attention one gives to their condition at this time the greater the reward to follow.

THE EARLY CHICKS.—By this time the early-hatched chickens are of good size, and if they have been fairly treated they are beautiful looking birds. Early hatches are attended with the greatest profit, as a rule, and November is none too early in our California climate, providing the eggs are laid by fowls that are mature, in good condition and are well through their moult.

FEEDING.—How best to feed poultry, young and old, is an unsolved question to many a poultry man. It is an excellent plan to experiment with this and that method of feeding and at all times to avoid getting into a rut and staying there. Just because one has fed his fowls in a certain way for a long time is no reason why he should not adopt other methods, or at least try them.

It is to be noted that not a few poultry men have come to the conclusion that dry feeding is far preferable to giving the hens mash of this or that meal, or of any, in a mixture. Some persons soak the wheat fed, giving it in a very moist state. One would think, after giving the subject some study, that to feed grain in the dry state is nature's way. It certainly is reasonable to think that where much moist food is given the muscles of the gizzard of fowls will in time become relaxed, flabby. To be in the best condition, the muscles of this organ need to have the exercise coming from grinding the dry grains.

The writer has found the system of dry feeding an excellent one for poultry of all ages. Bran or meal mixed with meat (for fowls absolutely require animal food in some shape) may be fed dry in troughs prepared for the purpose. Whole grain once a day, thrown in straw several inches deep, with a little green feed some time during the day, is an economical, profitable way of feeding.

CORN FOR POULTRY.—There are many who are averse to feeding corn in any shape to hens, giving as a reason that it is too fattening, especially when fed during our summer weather. Sometimes our theorizing proves faulty. Corn fed to poultry in excess is undoubtedly injurious. Fed judiciously, it is profitable—at least so the writer has concluded.

Experiments carefully made at the agricultural experiment station at Amherst, Mass., during the winter months of 1897 and the summer of 1898 conclusively proved the superiority of the "wide ration" over the "narrow ration." In the former a much higher proportion of corn was used than in the latter. At this station the record states that during the winter and early spring months a certain number of fowls fed with the "wide ration" laid 1071 eggs, while the "narrow ration" fed hens produced 860. During the summer and fall the record was 1098 to 859. Of course, one must use discretion in feeding corn, or his fowls will become too fat to lay well. Try the experiment, if it be an experiment with you, reader.

THE POULTRY INTEREST.—A large number of the residents of this State are engaged in raising poultry. The capital invested is no mean sum. The business—already of large proportions—is rapidly growing. Because of all this the State should have experimental stations, where poultry keeping in all its many varieties should be carefully studied, the results of experiments being widely disseminated among our people.

In some States in the far East practical lessons in poultry keeping are taught, the course extending over a period of one or more years. But here, in California, nothing is done in this direction. Utah is wide awake in this matter, as are also New York, Rhode Island, Massachusetts, Illinois and other States. By sending to the experimental stations in these States our poultry men can obtain bulletins or pamphlets describing in full experiments that have been carefully conducted by practical men from time to time. This literature may be obtained free.

NEW YORK EXPERIMENTS.—Bulletin No. 171, issued last December by the New York Agricultural Experiment Station, Geneva, N. Y., is before me. It is devoted to experiments on feeding animal food to poultry, and is well worth a careful perusal. I simply copy the summary of the experiments as it appears on the first page of the bulletin:

Of two rations which contained practically the same proportions of the ordinarily considered groups of con-

stituents, but different amounts of mineral matter, one wholly of vegetable origin proved much inferior for growing chicks to other rations higher in ash, containing animal food.

When the deficiency of animal food was made good by the addition of boneash, the vegetable food ration for chicks equaled or somewhat surpassed in efficiency the corresponding ration in which three-eighths of the protein was derived from animal food.

For laying hens the rations containing animal food proved superior to others in which all the organic matter was derived from vegetable sources. The vegetable food ration supplemented by boneash proved equally efficient for limited periods. Rations containing animal food proved very much superior for ducklings to rations of vegetable origin which had, according to the ordinary methods of estimation, practically the same nutritive value. A ration of vegetable food supplemented by boneash proved much inferior to another ration of similar composition in which three-eighths of the protein came from animal food.

Animal food may be supplied in several forms. Fresh bone, ground or broken finely, is excellent, but meat meal will give first-class results. It has the advantage of being readily procured, whereas comparatively few can get a supply of fresh bone. The meat meal is cheaper, relatively, than bone or fresh meat, and there is far less trouble in getting it in suitable shape for the fowls. WARREN ROBINSON.

Napa, Aug. 15.

### Preserving Eggs.

In the PACIFIC RURAL PRESS of June 10, 1899, there was an account of preservation of eggs with "water glass," which attracted much attention from our readers. The North Dakota Experiment Station now publishes information supplementary to that we have alluded to and states that another year's experience has confirmed all that has been said in the original article and furnishes us some further information.

Some of the "water glass" on the market is of a very inferior quality, is strongly alkaline from the presence of free soda or potash, and in such the eggs will not keep well. They soon take on a disagreeable odor and flavor. Again some of the "water glass" is very thin, and in such cases the proportion used should be somewhat larger. None who have tried the method, following the instructions given, report a failure. The station quotes the following from one letter commenting on the experiment:

I put down three barrels—nearly 300 dozen. Barrels Nos. 1 and 2 were strictly fresh eggs when put down and came out in very good condition at the end of four months. Barrel No. 3 was filled with store eggs, but supposed to be fresh laid eggs, and, when put under the tester, appeared to be all right. They came out with a disagreeable odor, and the liquor was also spoiled—all caused by stale eggs, I suppose. This system of preserving eggs could be used on a large scale, if it was possible to get perfectly fresh eggs, but our methods of testing is so crude and unreliable that it is impossible to depend upon it.

The general tenor of all reports thus far received agree with the above. By this method of preserving eggs when the "water glass" is drawn off, and water run through, the eggs are left uniformly clean and with no discoloration of the shell.

Many experiments have been made with other means of preserving eggs, but none have proved so uniformly satisfactory. If the eggs are coated with vaseline, they will keep for some time, but such eggs are disagreeable for handling.

It was thought that water containing a little formic aldehyde would prove a good preservative, but our trials showed that the chemical penetrated the shell, leaving the white of the egg as though hard-boiled, thus rendering the method unfit for use.

## THE DAIRY.

### The Dairy at the State Fair.

In the premium list just published by the State Agricultural Society there are very attractive prizes for dairy exhibits, and we hope there will be a great display of fine products. In fresh butter there will be ten premiums, aggregating \$275; in storage butter, six premiums, aggregating \$105; in export butter, two medals and a diploma, and in cheese, two premiums, aggregating \$15. Mr. S. E. Watson, superintendent of the dairy department, announces the following conditions:

No sample scoring less than eighty-five points to be entitled to any award. No distinction between creamery and dairy classes.

For the purpose of uniformity the butter should be packed in 25-pound tubs, with parchment linings. This tub should be enclosed in burlap and no marks placed on the tub. Address shipping tag, "Dairy Exhibit, State Fair, Sacramento," with the name of exhibitor on tag.

In storage butter there is no distinction between creamery and dairy classes. As in fresh classes, 25-pound tubs should be used, but larger sizes eligible. Storage must be made in public storehouse, with certificate as to dates.

Butter must be sent to reach Sacramento on September 8th, with all express and other charges prepaid. The butter will be sold after the Fair and proceeds sent to the exhibitor, unless otherwise instructed.

Correspondence and entry fee of \$5 should be sent to

Samuel E. Watson, 421 Market street, San Francisco previous to September 1st. After that date to Sacramento, Agricultural Pavilion.

THE DAIRY CONVENTION.—During the State Fair will be held the seventh annual convention of the California Dairy Association, September 11th and 12th, in the Senate chamber, State Capitol. Sessions will open at 9:30 A. M. and end at 5 P. M., with intermission from 12 to 1 o'clock. Papers are as follows:

"How to Increase Profits of Our Dairies." F. H. Armsburger, Stockton.

"Advantage in the Use of Silos." Not assigned.

"Feeding Millstuffs and Ground Feed." Not assigned.

"Improvement of Milk Delivered to Factories." Geo. A. Smith, Los Angeles.

"Supplementing Alfalfa as Cow Feed." Mrs. M. E. Sberman, Fresno.

"Providing Summer Feed for Cows." Not assigned.

"Improving the Cheese Product of California." F. H. Harvey, Galt.

"Farm Production of Dairy Feed." A. P. Martin, Petaluma.

"The Making of Cheddar Cheese." Leroy Anderson, Dairy Instructor, Berkeley.

"Aeration of Milk for Factory Use." Not assigned.

"Alkali Test for Lactic Acid in Cream." Not assigned.

"Cream Testing." Prof. N. E. Wilson, Chemist Nevada Experiment Station, Reno.

"Comparative Value of Millstuffs." Prof. M. E. Jaffa, Berkeley.

"Best Dairy Stock for Alfalfa Feeding." Not assigned.

"Barns, Stalls and Floors for Cattle." Mrs. M. E. Sberman, Fresno.

"Handling and Feeding Calves." Not assigned.

"Advantage of Keeping Dairy Records." Samuel E. Watson, San Francisco.

"Sugar Beet Pulp as Dairy Feed." Leroy Anderson, Berkeley.

"The Financial Standpoint of Dairying." Not assigned.

"Qualifications of Creamery Managers"—two points of view. E. H. Hageman and W. H. Roussel, Pescadero and San Francisco.

"Value of Dairying to the State." Prof. E. J. Wickson, Berkeley.

"The Hog; an Adjunct to the Dairy." Elias Gallup, Hanford.

"Dairy Cattle and Feed." Daniel Streeter, Biggs.

"Relation of Proprietor and Patron to Creamery." A. P. Martin, Petaluma.

"Variation in Milk Test." Warren Myers, Woodland.

The papers will be followed by discussion, so that every moment of the convention will be occupied.

### More About Good and Bad Cows.

We hope readers will not get tired because we are always trying to knock the poor cows in the head. It is necessary to do it; it is the easier way to make dairymen more prosperous, and it must be done. Recently some interesting facts and figures were presented at a recent Farmers' Institute by George A. Smith, the well known dairy expert of the Geneva, N. Y., Station. He used a chart showing the difference in the product of three cows at the station farm, Geneva, last year. Each cow weighed between 960 and 980 pounds, and all were six years old. They were each fed precisely alike, their rations being weighed out to them twice a day. They were fed with 40 pounds of silage, 6 pounds of alfalfa and 8 pounds of grain. The best cow gave 8000 pounds of milk, containing 5.6% of fat. The second one gave 6000 pounds of milk, containing 4% of fat. The third one gave 4600 pounds of milk, containing 3.8% of fat.

COMPARATIVE VALUE OF THE BUTTER.—Had the first cow's milk been made into butter, if we allowed 16% moisture, there would have been 515 pounds, which, at 20 cents per pound, would have brought \$103. The second cow's milk would have produced 276 pounds, which would have produced \$55.20. The third cow's milk would have made 191 pounds, which would have brought \$38.20. If the milk would have been made into cheese, the best cow would have produced 1070 pounds, which, at 9 cents per pound, would have brought \$97.20. The second cow, 660 pounds of cheese, \$41.80. The third cow, 475 pounds of cheese, \$42.80. Had the milk been sold at 2 cents per quart, the first would have returned \$74.40; the second one \$55.80; the third one \$42.80.

Summed up, the figures are as follows: The best cow returned a profit over the cost of the food she ate, in butter, \$47.50; the second cow, \$5.70; while the third cow returned a loss of \$9.30. In cheese there would have been a profit for the first cow of \$49.70; the second cow \$11.90, while the loss from the third cow would have been \$11.23. In milk, at 2 cents a quart, the profit of first cow would have been \$26.90, the second cow \$8.30, while the loss on the third would have been \$4.70. The best cow gave 3720 quarts of milk, the second 2790 quarts and the third 2140 quarts, and yet there was only a difference of \$10 in the price of the first and second cow.

TOO MANY POOR COWS.—He said there are just such object lessons in almost every dairy in the State. There are about 1,500,000 cows in the State, which return a value in butter, cheese and milk of \$60,000,000, or \$25 per cow. One-third of these cows is returning a good profit at present prices, one-third



are giving only a small margin, while the other 500,000 are actually running their owners in debt, just as the third cow numbered on the chart; so it would be a source of profit to their owners if 500,000 were killed and sold to the butchers.

He said the first thing a farmer should do is to buy scales and a Babcock machine and then test every cow in the herd and weed out all non-paying ones, even if it took them all. Don't keep scrubs, but dairy cows; then make a study of the various foods, buy those that are purest and best, then properly and judiciously combine them. But first ascertain the feeding value of the food, and do not pay any more than it is worth. Another point: Do not feed any more than the animal will eat, digest and assimilate; any surplus will be money thrown away.

A LOCAL NOTE.—It is a fact that many cows in California which give less milk than the poorest mentioned above do yield a profit on a low-pressure cheap-pasture basis, and no purchased feed; but this does not deny the fact that better cows and high-pressure feeding can be made to pay more, and therefore recourse to this line of work must be had as fast as practicable.

## THE FIELD.

### Peanuts in Orange County.

Of the many varied crops that the soil of Orange county can produce par excellence there is, perhaps, none so interesting as the modest and unassuming peanut. The Santa Ana Blade thinks that California has not taken up peanut culture to any great extent, although almost any farming district in the State has the necessary qualifications to make it a success. In some regions more or less attention has been paid to it, but nowhere has it been cultivated on so large a scale as in Orange county, which has the largest acreage in peanuts of any county in the State. Conservative estimates place the total for this year at about 300 acres, 150 of which are in the neighborhood of Orange and Tustin.

Alluvial soil, with the necessary amount of water, and long, warm summers make an ideal peanut country. There must be about six months of warm weather without frost to allow the crop to grow and ripen, and it will readily be seen that Orange county, with her excellent facilities for irrigation, is a typical home of the "goober." It is a fact, too, that the Orange county nut is as good as any in the world, and needs only proper handling to make it hold its own in the market with the Eastern product.

The chief center of the industry in the East is at Norfolk, Va., which is the main shipping point for the great peanut districts of Virginia and the Carolinas, and the nut from this part of the country fixes the price for the United States. Right here is the great disadvantage under which the Western peanut farmer works. His product in itself is just as good and better in many instances than that of his Eastern rival, but he has not gone into the business on a scale large enough to warrant the expenditure of capital in installing the necessary machinery to enable him to handle the crop to the best advantage. The peanuts of the West are sorted in a more or less hasty manner by hand, loaded into second-hand grain bags and shipped with as little labor as possible. In the East, on the other hand, the farmers have expensive machinery for sorting and preparing the nut for market, and in consequence their product is much more salable than is the hastily prepared one of the West.

Peanut culture in California is considered by many as a not particularly profitable industry, largely on account of the conditions already described, and in view of the fact that \$20 an acre is a very fair net income from a crop, this seems very true on the face of it. But the peanut is one of the most economical of crops and here is its great advantage. It can be grown for ten years on the same ground, and if there is any impoverishment of the soil it is imperceptible.

It can be planted between rows of young fruit trees without injuring their growth or its own, and land that would otherwise lie idle while the trees are growing can in this way be made to yield an income that may be considered as simply so much clear gain. It may be added that a large proportion of the peanuts of this country are raised in this manner.

The harvest begins about the first of October and is an important source of income to a great many, as it is estimated that about \$3000 is disbursed among the people from the beginning to the end of the season in November. The pickers are mostly Mexicans, though quite a number are drawn from the white population.

Almost the only formidable enemy of the peanut is the little red spider, which occasionally attacks the crop and destroys portions of it. This pest has not made its appearance to any noticeable extent for several years, however, and everything is favorable for a good output this fall. The drouth has effected the nuts to some extent, but judicious irrigation has largely overcome any injury from that source, and a 50% better crop is expected than that of last year. In the neighborhood of 10,000 sacks will be shipped from the county the coming season, and these will be divided among Los Angeles and San Francisco buyers.

On the whole, peanut culture, while it does not

rank as one of the leading industries and is generally considered unprofitable, yet it has its strong points of excellence, and many men who have taken it up on a large scale have made good incomes. With proper handling, and the investment of some capital in improved machinery, the Orange county "goober" may easily become a profitable and important source of income and take rank with the other industries which have made our soil and climate famous.

### The Hop Harvest.

Hop picking has already commenced in some of the fields near Sacramento, in the American river district, and hundreds of people are now engaged in the work. The Bee says: By the middle of next week the hop harvest will be in full blast, when thousands of people will be employed. The growers for some time past feared that there would be a great scarcity of pickers, and, notwithstanding the low prices offered for hops, they were prepared to give a pretty good sum for the hop gatherers. One of the most prominent of the hop raisers said to a Bee reporter that there are more applications for jobs than can be filled. He accounts for this from the fact that work has about been completed in the down-river orchards and the Chinese and Japanese who were employed as fruit pickers are returning. The Bee gives other interesting information from other districts in the Sacramento valley.

Picking has commenced in the hop fields at Wheatland, where there are about 4000 people engaged. Hundreds of Japanese flocked to the fields of Yolo county and many of them found employment. A large number of white people, Indians and Chinese were also employed. Large numbers of white families go into the fields and camp out during the hop harvest. Recently a large band of Japanese laborers returned from Wheatland, saying the fields were crowded. They will endeavor to find employment in the hop fields of Sacramento and Yolo counties.

At Wheatland the growers are paying 85 cents per hundred pounds for picking. In the fields on the American river the growers are also paying 85 cents, but the growers along the Riverside road, who will begin their harvest next week, have agreed to pay not more than 80 cents a hundred. One grower was heard to say that he had contracted to get as large a crew of pickers as he would need at 75 cents a hundred. It is believed, however, that he may have a strike on his hands before the crop is gathered.

The hop crop in the Elk Grove district is to be picked this year by Indians from the State of Nevada. Five earloads of Indians arrived the other day and were taken at once to Elk Grove. They were brought down by the growers, who have to guarantee the railroad fares. For many years the Indians were permitted to ride on the trains free of charge, but after a rule was made by the railroad company requiring the noble Piutes to puggle up the coin of the republic there were not so many of the redmen seen in this part of the country. They could not scrape together the price of the railroad fare between Reno and Sacramento. But when labor got scarce down here the growers chartered box cars and brought down a lot of Indians, just as they would so many cattle. But the Indians do not have to travel that way any more, as they are now provided with cars just like the white man rides in. The Indians are industrious and clean pickers, and when they are not supplied with firewater they are always on hand and may be depended upon. They are not swift pickers, for it is a well-known fact that the Indian will not break himself down with overwork.

The growers around Sacramento are giving the preference to white people who apply for employment, but there will not be enough of them to supply all the places. A grower said recently that the hop crop is very light this year, more than 25% less than what some of the experts had calculated upon. He said the hops are small, with but little foliage, and that they will be easy to pick.

## ENTOMOLOGICAL.

### Vine Leaf Mite.

TO THE EDITOR:—I send you some grapevine leaves. Will you tell what disease they have? I have used sulphur, but it does no good.—E. J. SHELLHAUS, Roseville, Placer Co.

TO THE EDITOR:—The diseased vine leaves from Mr. E. J. Shellhaus of Roseville, Placer county, Cal., which you submitted to me are attacked by the vine leaf mite, which resembles the pear leaf blister mite, which is occasionally injurious to pear trees in various localities of the United States and Canada. The vine leaf mite is called *Phytoptus vitis*, and is so small that it cannot be seen without a microscope. Its effect on the leaves, however, is very evident and resembles at first the effect of some fungi.

In the spring, when the leaves of the vine commence to unfold, those which are attacked by the mite show a kind of white down in spots on the under side of the leaves. As the leaves become large these spots increase in number and darken in color, changing to yellow, light brown and finally to dark reddish

brown. These spots consist of the swollen or hypertrophied leaf hairs, among and upon which the mites live. These spots in severe cases may become confluent and cover the whole lower surface of the leaves. The mites rarely attack the upper surface, but their presence is shown by raised or blistered spots on the upper surface. The injury to the leaf is comparatively slight and is only rarely sufficient to cause them to drop, or to seriously injure the crop or the vine. When very numerous, however, the mites are said to attack the blossoms sometimes, which results in their failure to set fruit. The mites pass the winter under the scales of the buds and upon the arms and trunk of the vine.

REMEDIES.—Early sulphuring is usually sufficient to prevent any serious increase of the pest, especially if the vines are pruned short and the brush from affected parts of the vineyard burned. Where this is insufficient, boiling water may be used to destroy the hibernating mites in the winter. The water should be poured over the trunk and arms of the vine in January, and care must be taken to use the proper amount. If too much is used the buds may be injured, and if too little, many of the mites will escape. About one quart of boiling water to an average-sized mature vine is sufficient. Very large or very small vines should be given proportionate amounts. The use of kerosene emulsion as a winter wash has been found effective in combating the pear blister mite and would, in all probability, be effective in this case. An emulsion made by mixing with a force pump three gallons of kerosene with three-fourths of a pound of soap, dissolved in a gallon of water, and then diluting with twenty gallons of water, would be about the right strength.

This disease was first noticed near Windsor, in Sonoma county, about three years ago. Since then specimens have been received at the Agricultural Experiment Station from Cloverdale, Glen Ellen and other parts of Sonoma county. This is the first case brought to our notice outside of Sonoma county, so that the indications are that the mite is spreading.

Berkeley.

FREDERIC T. BIOLETTI.

### Carbon Bisulphide for Woolly Aphis.

W. A. Irvine writes in the Southland of his experience with woolly aphis on young apple trees. He says: In my orchard, four years planted, of 6000 trees, I have found some trees affected with the woolly root louse, notwithstanding I dipped all the roots of the trees when planting in coal oil emulsion. I am now satisfied that the strength, as recommended, is not strong enough, and our experimental stations could greatly benefit those planting young orchards by testing to find out how strong it should be made to accomplish the desired result. I could easily locate those trees affected by excessive bloom and numerous sprouts just emerging around the base of the tree. In deciding on a remedy, I found tobacco dust rather expensive and the instructions on the use of bisulphide of carbon rather meager. However, I decided to use the latter, and out of 150 trees treated I lost but 15, and they were so badly affected that they would have died before another summer. Also, I have found but one tree in the 135 successfully treated that still had aphis, while those treated have taken on a new growth of 14 to 15 inches in three months. The growth on my orchard will average 18 or 20 inches to date.

I used the commercial carbon bisulphide, which costs at wholesale, in 10-pound lots and over, 10 cents per pound bulk. One pound will treat 125 trees. I used an ordinary gardener's trowel and dug small holes a foot from the tree on each side, 6 inches deep, and poured from a half-pound bottle half a teaspoonful, by guess, in each hole and covered it up quickly, as it is very volatile, even more than benzine, and should not be exposed near a fire.

It used to be said that "trade follows the flag," and that belief still exists, but statistics do not substantiate it. There is no sentiment about trade, its function being to supply human wants that it sometimes helps to create. What a great many consume constantly they will buy where they can get it the cheapest, asking and caring little where the supply originated. Patriotism is not dominant in buying and selling. Taste and fashion are more potent. Geographical situation, the cost of the product laid down, are prime factors also. Trade will, however, "follow the flag" that shelters it. If the flag secures peace and rightful law to the trader, and if its folds carry assurance of protection, trade will follow wherever it flies.

THE Dead Sea, which for thousands of years has been a forsaken solitude in the midst of a desert, on whose waves no rudder has been seen for centuries, is to have a line of motor boats. The first little steamer, built at one of the Hamburg docks, is 100 feet long, and began the journey to Palestine on June 16.

THE grain side of a leather belt should be run next to the pulley. Belt makers say that 25% more power can be transmitted with the grain side than with the flesh side next the pulley. A piece of beeswax occasionally rubbed on the belt and pulley ought to stop the belt from slipping.



## Agricultural Review.

### ALAMEDA.

**GRAIN WAREHOUSE OPENED.**—Oakland Enquirer, Aug. 18: Grain is now being received at the new warehouse of Bal-four, Guthrie & Co. The steamer Gypsy has discharged three cargoes of barley from Moss Landing, and, as soon as the cleaning machinery has been tested, the grain will be shipped to Liverpool.

**FRUIT CANNING.**—Haywards Journal, Aug. 18: Hunt Bros.' Cannery is breaking all previous records. At present they are 12,000 cases ahead of this time last year, and are putting up an average of 2200 cases a day. It is expected that this season's pack will be 150,000 cases. Last year it was 125,000. The fruits being canned at present are peaches, pears and plums. The can-making plant is running at its full capacity and employs between forty and fifty people. It is equipped with the very latest machinery, and is a complete success.

### BUTTE.

**ORANGE PROSPECTS.**—Oroville Register, Aug. 16: A big crop of oranges and olives is promised in Palermo this year. The trees bloomed well and the fruit set in good shape. As many young orchards will bear this year, it is safe to estimate Palermo's coming crop of oranges at from 225 to 250 carloads. We cannot give figures for the olive crop.

### KERN.

**IRRIGATION ENTERPRISE.**—Bakersfield Echo, Aug. 12: To-morrow will see the inauguration of E. M. Roberts' new irrigation system. Two wells have recently been opened, making eight that will be operated from one pumping station. None of these are deep, about 30 feet being the average, and they are expected to develop 5 cubic feet per second, being enough to irrigate the 330-acre tract. A 40 H. P. engine has been installed. Oil will be used, and Mr. Roberts estimates that \$3 per day will cover his expenses for fuel. This is one of the first pumping plants installed in the county by an individual. In southern California the private pumping plant has become a fixture, and in Santa Clara county there are about 2000 small pumping plants in operation. Water is but a few feet below the surface in this county, and the pumping plants promise to become an individual adjunct to every successful farm.

### KINGS.

**DIRECTORS ELECTED.**—Hanford Journal, Aug. 14: At the annual meeting of the People's Ditch Co., S. B. Hicks was elected president; W. R. McQuiddy, secretary; J. G. Mackey, E. Sanborn, I. V. Taylor, S. B. Hicks and J. J. Cortner, directors; John Rey, superintendent; Farmers' and Merchants' Bank, treasurer.

**GRAPE CRUSHING.**—Hanford Sentinel, Aug. 16: Mr. Sargent of the Hanford winery stated that the institution would not open before the 1st, and probably not then, as the present cool weather retarded the ripening of the grapes very materially. The company has an assurance of a good run this season, as grapes are not only plentiful, with a good outlook for an extra large second crop, but they have purchased, not only all the grapes of the Lucerne, but have the entire crop from the Banner as well.

**HEAVY CROP.**—Hanford Journal, Aug. 14: The crop of honey in this county is light this year—about a third less than it was last year. In 1899 there were four carloads of honey shipped up to this date, whereas this year none has been shipped as yet, and there are only two carloads in sight. F. E. Brown, secretary of the Central California Bee Keepers' Association, has an interesting exhibit of samples of Kings county honey in small bottles at his place of business. The samples vary in color from that which is almost colorless to that which is much darker.

### LOS ANGELES.

**WATER SUPPLY INCREASING.**—Monrovia Messenger: As is well known, the supply of water in the mountain system decreases during the month of August. It is not the case this year, however. There has not only not been a decrease in the average volume of water this month, but there has been an actual increase. It is accounted for by the recent heavy rains which have prevailed over the desert. The desert being higher than the valley, the water naturally flows toward the valley, and, as a consequence, we are the beneficiaries.

**GOOD PRICES FOR WINE GRAPES.**—Los Angeles, Aug. 11: The local grape crop intended for wine making has been sold. The buyers are local wine makers, who will divide the crop. The price paid is \$16.50 per ton for black and white varieties, without discrimination. A standard of 24% sugar is set, and 50 cents per ton is added for each degree above standard and

deducted for all below it. H. J. Woolacot rendered the grape growers valuable service in securing so good a price for the crop. It is recognized that his efforts added \$10,000 to the bank account of the growers. The crop is estimated at 6000 tons and will bring the growers close to \$100,000.

### NAPA.

**FRUIT AND DAIRY INTERESTS.**—TO THE EDITOR: The Napa Fruit Co., with its packing house or drier at Napa City, has materially enlarged its plant and scope of operations for the present season. It purchased a commodious dance hall and moved the building bodily, making it an annex to the packing house. It has installed ample machinery and appliances (from the Anderson Prune Dipper Co.) to enable it to handle for the association a large portion of the prune crop of southern Napa county. The company is mainly co-operative, being composed of leading growers located near Napa. It was organized in 1893. A. D. Butler, who has a productive orchard in Brown's valley, is one of the directing trustees. C. D. Mooney is drying and packing peaches on an independent basis near Rutherford station, Napa county. This is his fifth year at the business. When the Prune Growers' Association was organized he visited his regular patrons, and, learning that they would take his pack, the same as in former years, he resolved to keep out of the association. Of course, the growers who sell to him are non-association people. Mr. Mooney is paying \$10 per ton for fresh prunes running 80 to 90, \$12 per ton for 60s to 80s, \$15 per ton for 40s to 60s. He expects to sell 200 tons of dried fruit. His prunes are packed under the Liberty brand, and are sold mainly to retail grocers in San Francisco. The only creamery in Napa county is that of Taplin Bros., 1½ miles east of St. Helena. The establishment was founded two years ago, mainly to handle the product of the Taplin dairy, with its thirty to forty cows. It now has nearly forty patrons and receives 4500 pounds of milk per day. There is constant growth in the business. Some alfalfa is grown in the locality without irrigation, corn usually thrives well, beets and pumpkins are always productive crops. Those constitute the fresh feed for dairy stock. The creamery finds its main market for butter in Napa and St. Helena, where it secures 2c per pound above San Francisco market quotations. It is now dispensing about \$700 per month to its patrons, besides profitably caring for the product of Taplin Bros.' dairy farm. O. E. Jones is butter maker.

H. G. P.

### ORANGE.

**DRIED FRUIT.**—Anaheim Gazette, Aug. 16: The Deciduous Fruit Association has sold its dried apricots at prices which, while not given out, are satisfactory. The output was short, being seventeen tons, as compared with twenty-six tons last year. The fruit was also poorer in quality, and prices ranged away below last year's figures. The Association received for last season's dried fruit 11½ cents per pound, which amounted to \$36.50 per ton for the green fruit. The market quotations for dried apricots this year range from 5½ to 6½ cents per pound, but the Association obtained better prices for their output. The fruit dried lighter than last season, taking from five and one-half to six pounds of green to make one of dried fruit. The ratio last year was 4.70 to 5½ pounds of green to one of dried fruit. The drouth and general unfavorable winter weather is thought to be responsible.

### PLACER.

**NEW FRUIT HOUSE.**—Newcastle News: Carpenters are busy on Geo. D. Kellogg's new fruit house. The foundation is up and the floor is being laid. It is on practically the same ground as the former building occupied, although the additional space he has secured permits him to put up a larger building than the old one. He will have considerable more floor space than formerly.

### SACRAMENTO.

**STATE FAIR DOG SHOW.**—Sacramento Record-Union, Aug. 16: Secretary Shields of the State Agricultural Society has issued a pamphlet concerning the bench show to be held during the State Fair, under the regulations and with the sanction of the American Kennel Association. David St. Clair, who has officiated as clerk at most of the bench shows given on the Pacific coast during the last few years, has been employed by the State Fair directors, and from now on will be located in Sacramento and assume charge of the listing and placing of dogs at the coming show.

### SAN BENITO.

**PUMPING POWER HEAD.**—Hollister Advance, Aug. 17: W. K. Goff has invented a power head for deep-well pumps. The principle of the head is a counter-balance to offset the weight of the water. The counter-balance is poised on the pump

rod and is lifted or depressed by very short leverage. The power is applied by a small cogwheel, running into a large cogwheel connected with the pump rod by pitman. A 7-inch stroke in a cylinder, lifting water 48 feet, can easily be manipulated by hand; 1 H. P. is all that is necessary for a 10-inch stroke. Mr. Goff has had his machine on exhibition at DeForce's orchard this week. It works to a charm.

### SAN BERNARDINO.

**BEET HARVEST BEGUN.**—Chino Champion, Aug. 17: Beet harvest is in full swing on the Chino ranch. In the neighborhood of ninety tons of beets are being shipped out each day. Some of the beets coming in are as fine, big and well developed as we have ever seen, and among the finest and biggest that we have seen are some grown on moist land without any irrigation. The secret of it is the natural sub-irrigation. The sugar company is employing about sixty men in the fields to harvest its crops. Ten to twelve plows are busy plowing out the beets.

**WATER SUIT INVOLVING NEW POINT.**—San Bernardino Sun, Aug. 16: A suit involving a new point in the diversion of water has been filed by Geo. H. Walker of Redlands against the Redlands Electric Light & Power Co. The plaintiff alleges that he took up a tract of land in 1890, through which Mill creek then flowed, and subsequently obtained a patent for the land. At that time the land was partially timbered, and he erected a saw mill, which was driven by water power from Mill creek, while he also used the water for domestic and irrigating purposes. About two years ago the defendant built a dam across Mill creek, 2 miles above the plaintiff's place. Not only was his water power taken away and his mill rendered valueless, but he had no water for domestic or irrigating uses, which he formerly had by reason of his riparian right, and stranger than all, the timber on his land died, and he sets up the theory that the stoppage of the water at the dam and diverting it prevented there being any percolating water in his land, which before was well watered. For the loss of the riparian right he claims to have been damaged \$1000, for the loss of the timber \$1000, for the loss of the power \$2000.

### SAN DIEGO.

**HONEY CROP.**—San Diego Union, Aug. 16: The honey season is now over, and the beemen are in much better spirits than they were four months ago. The estimate of honey brought to market places the amount at 600,000 pounds, or about twenty carloads. This has been sold at 5 to 7 cents a pound—the highest that has been paid in recent years. Two and three years ago 3 cents was the ruling price. An average yield of honey in this county is placed at fifty carloads, so that this year's crop is not half. In some districts the yield was fully up to the average, while in others practically no honey was obtained. The Escondido section seems to have been the most favored. One beeman obtained 17,000 pounds from 120 stands. This netted him over \$1000. The people in the Ramona section, where are some of the largest apiaries in the county, had a fairly good yield. Most of the honey was extracted, as that is found to be more profitable to handle than comb honey. The quality this year is better than it has been for many seasons past. Most of this honey will go to Germany, where there is a good demand at a satisfactory price. Heretofore New York has been the principal market. Last year no honey shipments were made from this county, and those apiarists whose bees made enough honey to keep themselves alive during the winter considered themselves fortunate. The outlook for this season was little better as the winter advanced, and but little rain fell. But several downpours in May changed the prospects. The sumac, sage and buckwheat came out, and the hives began to be filled; but the yield was an uncertainty all through the summer. The beemen did not know how long the season would last, and feared that each time they extracted it would be the last. The bees continued to work, however, and did not cease their labors until a week ago. What honey they bring in now they will be allowed to store for their own use.

### SAN JOAQUIN.

**A "CORNER" ON POTATOES.**—Stockton, Aug. 16: The Chinese on the island are making an effort to corner the potato market and during the past few days have succeeded in advancing prices from 35 to 40 cents to 45 and 50 cents per sack. They are also very independent about selling, and will only haul the potatoes to the river bank, where the buyers are compelled to accept them and pay the freight to points they wish to ship them. A large buyer, who returned to-day from a trip through the islands, says the general feeling is that still higher prices will be demanded by the growers. Another thing that is interfering with the supply of po-

tatoes is the scarcity of labor. The Chinese who have been digging have quit and gone to the vineyards to pick grapes, as they can make more money at the latter occupation. The white potato growers can not get their potatoes dug as fast as they wish, and the supply on hand is fast being disposed of. Unless the commission merchants can break the combine, it is believed they can not fill all of their orders, many having accepted large contracts for shipments to the Eastern and Southern States.

**GRAPE GROWERS PROSPEROUS.**—Stockton Independent: Wherever the farmer has planted grapes and attended to them properly will be found a farmer who has made money, and, generally speaking, is out of debt. It is the lesson of diversification of farm products that is needed in this county more than anything else to give a guarantee against crop failure and hard times. While there are dozens of products that may give profitable relief to both the land and the farmer grape growing is one of the surest means of securing prosperity without absolute dependence upon the grain field.

### SANTA CLARA.

**PRUNES BLOWN DOWN.**—San Jose Mercury, Aug. 21: There were reports from a number of sections yesterday, especially in the elevations in the vicinity of Los Gatos and Saratoga, of a large percentage of prunes being knocked off by the wind. It is believed that the damage is not nearly so great as some fear, and that most of the prunes that fell on the ground were ready to pick. If workmen can be secured to pick up the fallen fruit, it can all be dried and saved. Judge Bond stated last evening that from reports he had received not in excess of 30% of prunes had fallen from the trees, and very few were blown off that were not ready to pick. The dust that has been blown around in clouds has done no damage to the prunes that are on the trays, but drying apricots and pears may have been injured some.

### SANTA CRUZ.

**APPLES BADLY "SCALDED."**—Watsonville Pajaronian, Aug. 16: The "scalding" weather two weeks ago did a large amount of damage to the growing apple crop of Pajaro valley. In some orchards near the foothills and in the Armas and San Miguel districts the loss of Bellefleur will run from 10% to 25%. The Bellefleur crop is the most damaged. In some orchards where Bellefleurs were badly scalded the Newtowns were scarcely touched. In the hill districts the Newtowns fared badly. Apples on the north side of a trees are injured as much as those on the exposed side. The scalded portions of the apples are now turning black, and the extent of the damage is more evident than it was a week ago. The same condition is reported from Sequel and northern orchards in this county.

**ADVOCATES PLANTING WINDBREAKS.**—Pajaronian, Aug. 16: A. N. Judd advocates planting trees for windbreaks on "down-the-valley" orchards. He says he has one which proved conclusively the value thereof in assuring a fruit crop. Windbreaks are used at Lompoc, and the successful orchardists of that district say that the apple crop would be of slight value with them if the rows of trees used as a windbreak were taken out.

### ARIZONA.

**BENEFICIAL RAINS.**—Phoenix, Aug. 18: Heavy rains in Yavapai county yesterday and last night have fed the streams tributary to the Salt river to such an extent that 3 inches is running over the dam at the head of the Arizona canal, giving a flow of 25,000 inches—a supply of inestimable value to the Salt River valley. Light rains have fallen in the past few weeks, but not sufficient to do permanent good to irrigation. This rise, however, will provide enough water against further drought this season. Reports from various parts of the Territory tell of general heavy rains.

### OREGON.

**POOR WHEAT CROP.**—Oregon Agri-culturalist: The wheat crop of the Willamette valley is very poor this year. It is the nearest to a failure of any crop in recent years. Hundreds of fields are not worth cutting. The farmers who usually get from thirty to forty bushels per acre will not have over fifteen this year. The majority of the farmers will have less than ten bushels per acre. The poor crop is due to a combination of causes. Insect pests have been more numerous than ever before. Climatic conditions of the season have probably been at the bottom of the trouble, although it is not to be said with certainty what special feature of these conditions has been unfavorable. We are inclined to believe that the unseasonable warmth of the latter part of the winter, followed by the long, cool, wet spring, had a good deal to do with the unhealthiness of the crop.



## THE HOME CIRCLE.

## Berkeley's Ode.

The Muse, disgusted at an age and clime  
Barren of every glorious theme,  
In distant lands now waits a better time,  
Producing subjects worthy fame.

In happy climes where from the genial sun  
And virgin earth such scenes ensue,  
The force of Art by Nature seem outdone,  
And fancied beauties by the true.

In happy climes the seat of Innocence,  
Where Nature guides and Virtue rules,  
Where men shall not impose for truth and  
sense

The pedantry of courts and schools.

There shall be sung another Golden Age,  
The rise of Empire and of Arts;  
The good and great inspiring epic rage,  
The wisest heads and noblest hearts.

Not such as Europe breeds in her decay,  
Such as she bred when fresh and young,  
When heavenly flame did animate her  
clay,  
By future poets shall be sung.

Westward the course of empire takes its  
way.

The four first acts already past,  
A fifth shall close the drama with the day:  
Times noblest offspring is the last.

—Dean Berkeley.

## His Stewardship.

When the London papers announced that Raymond Fox, M. P. for Mid-Clare, had applied for the stewardship of the Chiltern Hundreds\*, men in Parliament were not much surprised. His engagement had been very apparent, as his pretty fiancée, far from trying to allure him from his political duties to society frivolities, had developed an absorbing interest in politics, and was frequently to be seen in the House, sitting through dull debates behind the grille of the ladies' gallery. And this she did on the chance of hearing Raymond open his eloquent lips for five or ten minutes.

But, you may ask, if the woman was so sympathetic, why did his engagement entail his retirement from Parliament? Well, this was the way of it. Her father, though an Irishman and a supporter of the same political party, having made his way in the world, desired to have as a son-in-law a man who could do the same. He made it the sole condition of his consent to the engagement that Raymond should leave Parliament till he had put himself in a position of independence by exercise of his profession.

Raymond had been called to the Irish bar, but had never practiced. He felt confident, however, that all would be plain sailing. He had attained a reputation as an orator and all round clever fellow, was also a popular hero in a way, owing to a prominent part he had taken in an eviction affray in which the police came off second best. So there was first of all a private conference with the woman and then a confidential talk with his party leader and the whip, and it was unanimously decided that the retirement was to be sanctioned.

"When you are a rich man," said the whip, "and have money to waste on an election contest, never doubt but we'll find a seat you can fight for us. I suppose Mid-Clare is safe for our party?"

Raymond assured them that Mid-Clare was safe, and promised to go down and back their candidate. "I'll be of some use to him with the 'hillside men,'" he added with a meaning smile.

"I flatter myself I have some influence in that quarter." So they shook hands with him in congratulation, and he went off elated, to consult with Molly and Molly's father as to the prospects of a speedy wedding.

Thus was it that the paragraph about the Chiltern Hundreds came into the papers. It created no great stir in London, and, in fact, appeared in a very backward corner of the papers, but in the Dublin and Irish press it produced a ruction such as the party never dreamed of on the day when the leader and the whip decided that Fox might

safely go, and that the seat was safe for Moriarity.

Raymond Fox owed that seat solely to the favor of the "hillside men."

This section of the constituency, though disavowing all parliamentary agitation in favor of stronger measures, found themselves in a position of delightful supremacy.

By holding aloof and talking haughtily, as if the ballot box were beneath notice, and saying they disclaimed to vote at all, they found themselves courted on all sides, and talked at in eloquent style by the rival candidates and their backers. There was some pretty tall talk at the Mid-Clare election, I can tell you, and a good deal of it was never reported in the papers; but Raymond Fox won easily. Phil Foy, a veteran who had come through the '48 and '67 troubles, announced it as his conviction that the young man would go to the scaffold for his country. That clinched the matter.

There were two or three objectors, but old Phil carried all objection down. The word was given in the right quarter and Raymond headed the poll. It was on Phil's support that he was reckoning when he promised to go down and back Moriarity at the bye-election.

One of these days the following scene was enacted at the door of a roadside village in the County Clare. The cottage was the residence of Phil Foy, and he leaned over the halfdoor smoking contentedly, till a strapping young fellow came up from the town and disturbed his serenity by wildly waving a newspaper at he approached.

"What's in the paper, Denny?" he shouted in a hearty voice. "Speak up, man, and tell us—is it war?"

Phil was always on the outlook for a "war." There had come none to answer his expectation in all his lifetime. The Crimean one was a deadly disappointment that he had hardly recovered from yet.

"No chance of war at all, Phil," shouted Denny, "but here's something that will astonish you more than if there was."

"What is it, then?"

"This," said Denny, with a grin, "Raymond Fox has resigned his seat."

"Hoorah!" said Phil, "the boy was too good for them. He belongs to us by rights."

"Hold on till you hear all," said Denny.

Running his finger down the column he found the place and read aloud:

"The London papers announce the resignation of the member for Mid-Clare. Mr. Raymond Fox has applied to the Speaker for the stewardship of the Chiltern Hundreds."

"A government office," said Phil in an ominous voice. "'Tis a lie. I'll never believe it."

"'Tis worse than Sadleir and Keogh," went on Denny. "They were sought after and had temptation put in their way; but he's been running after a job himself. He applied for the post, they say, and he has got what he asked," and he read again from the London correspondent's letter:

"The Speaker has granted the stewardship of the Chiltern Hundreds to Mr. Raymond Fox."

Phil struck the door a mighty blow and shivered his pipe to pieces.

"'Tis a lie, I say; I'll wait till I hear it from his own lips."

"Well, you'll not have long to wait," went on Denny, "for he's coming to town on Wednesday week. Moreover, here's a letter for yourself, Phil, with the London mark. Maybe there's news in it."

Phil rent the envelope asunder, saw the bold signature, "Raymond Fox," and read these words over it: "I hope to stand among the boys of Clare Wednesday next and to give them an account of my stewardship. The cause of my resigning at this juncture is one on account of which my friends will have reason to congratulate me, and I hope that you, Phil, may be among the foremost to take my hand and wish me good luck in my new sphere of life."

Slowly the old man read it to himself; tears were gathering in his eyes. Suddenly they flashed fire. "An account of his stewardship" is it, then, he

is for giving us, and asking us to wish him luck? I'll teach him the mettle that is in the boys of Clare. Wednesday week, is it? Aye! Well, Phil Foy will be there."

\* \* \* \* \*  
Raymond entered the town in a wagonette and pair, and a brass band playing before him and torch bearers in ranks around. He stood bareheaded and elate, waving his hat, and proud to show Moriarity, the new man, how popular he was. "But wait," he whispered in confidence, "wait till you see the reception I'll get from 'the boys' when I speak to-night. I know how to gain their hearts, and, what's more, their vote. I don't mind giving you the straight tip—when in doubt quote John Mitchell. I have a couple of fine passages to quote to-night; just wait till you hear how they'll cheer."

The hall was reached. It was packed to suffocation, and outside in the street all the youngsters of the town assembled to stand in the mud and rain and echo the acclamations that would come through the windows.

Raymond struggled up the hall to the platform with difficulty. He had to shake hand right and left. He had, moreover, to try to remember everybody's name. It was somewhat confusing, but he bore it well. There were some, however, whom he remembered but did not see. Where was Phil Foy? Where were those sturdy battalions who, with swinging shillalabs at a time of stress, had cleared the market square of his opponents, proving that "physical force" doctrines were with him not merely theoretical?

His brow cleared when at length he gained the platform and faced the hall. There was the veteran Phil, well to the back, with his stalwarts around him some six rows deep. Phil leaned on the top of his blackthorn. Every man carried one.

"Aha! I see," thought Raymond; "an assault is feared; they're guarding the entrance."

He waved his hand airily in the direction of Phil, but concluded the old man did not see him, for there was no response.

They were singularly undemonstrative to-night, these "hillsideers." Maybe they were sad at losing their chosen one.

Could he have heard what they were discussing in undertones he would have understood their grinnings. "'Tis a group of islands somewhere out in the East he's made governor of," said one. "I don't know where they are, but 'tis a fine salary he will be getting."

"Now little you know about it," said another; "'tis just a big estate he's made agent for. Steward's the English for a land agent. Bad luck to all of them."

Anyhow, they all shook their heads and prophesied that he might end on the bench, for he was a lawyer, and would be looking to be made a judge, and coming around no doubt to the Ennis assizes and hanging some of his old friends.

The chairman rose and spoke, and when he had finished Phil's party uttered portentous groans. Half the audience joined in this demonstration, jumping to the conclusion that some one had discovered a dark blot on the poor man's political history. He had hitherto been one of the most respected and upright Nationalists, familiarly known as "Honest John Cuddihy." That made matters worse if he had gone wrong now.

Even Raymond and Moriarity looked on him coldly, though he had spoken flatteringly of them both. "Too bad," they thought, "to saddle us with an unpopular chairman." But now the retiring member, believing he soon would be all right, sprang to his feet in an alert and graceful manner, and, flinging out his right arm, struck an attitude suitable for the opening of his great oration.

"Men of Banner county," he said, in thrilling, musical tones, then paused for the usual applause.

I must explain to the unsophisticated Sassenach that, like Homer's heroes, most Irish towns and counties have their appropriate epithets, which no

election speaker should be ignorant of. There is "rebel" Cork, "gallant" Tipperary, Limerick of the "violated treaty," the "urbs intacta," which is Waterford, and Galway, the "City of the Tribes."

Well, not to digress, Clare is the Banner County, and when Raymond Fox held up his right hand in that melodramatic fashion he was meaning to suggest that, figuratively speaking, he was upholding the county's banner. There was little applause.

"Men of the Banner County," he repeated.

Then in a voice of thunder that made him collapse, came a voice from the back of the hall:

"Boys of Clare!"

He suddenly was aware that Phil Foy was standing erect and defiant, pointing at him with derisive finger. The audience by now had their backs to the platform and were struggling for a glimpse of the new orator. Raymond Fox could not proceed when nobody was looking at him. He folded his arms firmly and said in a calm tone: "I beg a hearing for my good friend, Phil Foy. He has no doubt some news of importance."

"Ye need beg nothing for me, young man," said Phil. "Keep all yer beggary for the British Government. I can speak to the boys of Clare without your favor, Mr. Raymond Fox."

A shout of approbation went up. "Bravo, Phil! Go on, Phil!"

Half of them had not the slightest idea as to what was up, but assumed that anyhow Phil was right. As a man who had been in jail for Ireland, his opinion was taken as a rule on trust.

A thrill of unholy joy went round the room, and they cheered him lustily. Was he not providing excitement enough to keep the town going for seven years? He had cast a slur upon the respectable Mr. Cuddihy—"Honest John," he was denouncing young man Fox, whom he had himself made member. "Three cheers for Phil!" they shouted; "Go on, Phil!" They wanted to hear more.

"Boys of Clare," went on Phil when the tumult quieted, "in presence of you, I have to ask Mr. Raymond Fox whether there is any truth in the announcement that he has accepted British gold and taken an office under the Government."

A howl of execration went up. They believed it already. Raymond stood as one thunderstruck, then laughed carelessly.

"Certainly not. I retire from Parliament to devote myself to practice at the bar. I would ask my old friend Phil Foy the grounds he has for the monstrous accusation."

"'Tis in all the London papers. 'Tis copied in the Dublin weeklies. I have it in black and white, and your own letter, moreover, young man, saying how you'd come and tell us how you got the stewardship."

Raymond passed his hand over his forehead in a dazed way. The outlook was threatening, many of the audience were shaking their shillalabs at him in a suggestive fashion. Moriarity, who was a bit of a wag, was cruel enough to whisper:

"Are these the 'boys' you spoke of influencing on my behalf?" and then smilingly, "Try them with John Mitchell, quick, for mercy's sake, or 'tis murdered we'll all be!"

"Hush!" said Raymond testily, and then he faced the crowd. "I await," he said "the reading of these extraordinary allegations, which as far as I can judge must be the figment of a disordered imagination."

His manner was haughty in the extreme; unconsciously he fell into an English accent, which quite unwillingly he had contracted at St. Stephen's. The audience resented both the English accent and his manner.

Phil Foy held up a newspaper and a letter, and he signaled for silence. Instantly all was still.

All leaned attentively to hear, and Phil, holding the document to the glare of a lamp, read as follows:

"Our London correspondent states on good authority that Mr. Raymond Fox has been appointed to the stewardship of the Chiltern Hundreds. A vacancy is thus created in Mid-Clare."

"The Chiltern Hundreds, by Jove!"

\* A tract of crown land in Buckinghamshire and Oxfordshire, England, to which is attached the nominal office of steward. As members of Parliament cannot resign, when they wish to go out they accept this stewardship, which legally vacates their seats.



laughed Moriarty. Fox, my boy, hurry up and explain the business, or we're lost."

But Raymond could hardly find words to explain—he hesitated and stammered.

"Speak up," shouted Phil. "This is no laughing matter. Are the words on this paper true or are they not?"

Raymond collected himself. "Give me leave to explain. The statement, as I shall show you, is verbally true; but my good friend is ignorant of the formalities of Parliamentary procedure."

"And proud I am," shouted Phil. "Boys, he gives in to it! Away with him."

The mirth on the platform was checked by a sudden scuffling sound from the bottom of the hall—the noise made by close crowded, heavy booted men, who were finding their feet and their sticks.

Raymond turned pale as death, plucky as he was. Moriarty ceased his chuckling. "We're lost men," he murmured; "they'll break every bone in our bodies."

There was a rush for the platform, and the steward of the Chiltern Hundreds stood there facing the tumult. He had nothing to hope for now but that they'd find out their mistake after he was dead and give him a place among the martyrs. The newest form of dying for one's country this would be, to be killed by mistake in an election riot by one's own friends.

But it turned out that John Cuddihy had done a wise thing. He had brought the key of a door at the back of the platform, thinking that though they brought the hero of the day up the hall at arrival to receive the handshakes of his admirers, they might wish to depart with less obstruction.

So, as Raymond stood there with his arms folded and his eyes flashing, ready for martyrdom and thinking of Molly, he felt his coat-tails seized from behind, and before he knew where he was he was swung around and propelled almost headlong down the stairs. The door was clapped to behind the fugitives, and the clatter of sticks that came on it in a minute or two made them glad to be on the safe side of it.

"To the station," said Mr. Cuddihy to the driver of the wagonette. "Drive fast and you'll catch the 8:30 train. Never mind the music!" (this to the bandmaster, who was mustering the musicians). "Goodby, gentlemen, I must go and lock them in, or they'll be after you."

Thus their lives were saved but Raymond's reputation was beyond salvation. Of course, the business was explained and cleared up and understood by most people, and by them treated as a joke. But it is not a good thing to be the butt of a joke if you want to be taken seriously and aim at being an M. P. And then away up the country there were people who never listened to the explanation. They were told that Raymond Fox was not in receipt of a Government salary, and that his stewardship was only a matter of form, and that he wasn't in the position beyond a week.

"Well, now," they would say with a twinkle in their eyes. "And he gave up the job, after the bother he had of getting it. It took Phil Fay and the boys to strike terror to his soul."

Raymond is happily married to Molly and a success at the bar; but I need hardly tell you that he does not go on the Munster circuit, and if ever again he contests a seat it will be one at a reasonable distance from the County Clare.—*Cornhill Magazine*.

#### Treatment for Dyspepsia.

T. Lauder Brunton lays down the following rules for the treatment of chronic functional dyspepsia: The first rule is to eat slowly, masticate thoroughly and insalivate completely, three things which are by no means always the same. The next rule is to take solids and liquids separately, the latter in the shape of hot water on rising in the morning, between 11 and 12 in the forenoon, about 4 or 5 in the afternoon, and at night before going to bed. When

these rules do not suffice to remove the dyspepsia, the patient must take his farinaceous and proteid foods at different meals alternatively, a farinaceous meal at breakfast time and again at 5 o'clock and meat or fish meals at midday and at 8 o'clock. In some cases it will be found advantageous to supplement the gastric juice with a little acid and pepsin.

#### The Wishing Sands.

The summer was at August,  
The sea was in a lull,  
From Scituate to Gurnet,  
From Mahomet to Hull.  
It was the tranquil hour  
Of earth's expectancy,  
When we lay on the wishing sands  
Beside the sleeping sea.  
We saw the scarlet moon rise  
And light the pale gray land;  
We heard the whisper of the tide,  
The sighing of the sand.  
I left the ardent flutter  
Your heart gave for delight;  
You knew how earth is glad and hushed  
Under the tent at night.  
We dreamed the dream of lovers,  
And told our dream to none;  
And all that we desired came true,  
Because we wished as one.

—Ainslee's Magazine.

#### Aaron Burr's Daughter.

When Theodosia was fourteen she took her place at the head of her father's household and became his inseparable companion, her playful wit illuminating his hours of relaxation, her steadfast courage, her strength, her very presence, constituting the most powerful bulwark of his defence in the darkest hours of his life, states a writer in Lippincott's Magazine. She had much of her mother's self-poise and elegance of manner, together with her father's dignity and wit. When she reached maturity, though short in stature, like her father's family, she carried herself with a noble dignity which, with a certain lofty benevolence of countenance, the refinement of her features, the frank intelligence of her brow, the healthful bloom of her complexion, made her singularly beautiful. She inspired in her father the most absolute confidence in her. "Many are surprised that I could repose in you so great a trust as that of yourself," he wrote to her when she was seventeen, "but I knew you were equal to it and I am not deceived." He sent Brant, the Indian chief, to her from Philadelphia with a letter of introduction—she was but fourteen at the time and mistress of "Richmond Hill," where she entertained him with an ease which gave her father much gratification. She gave a dinner in his honor, inviting to meet him some of her father's friends, among them Volney, Bishop Moore, Dr. Bard and Dr. Hosack. She was already a belle, with many admirers ever in her wake, when Edward Livingston, then mayor of New York, taking her aboard a French frigate lying in the harbor of the city, thus warned her: "You must bring none of your sparks on board, Theodosia. We have a magazine here, and we shall all be blown up."

#### To Win Children.

"No subject could be of more vital importance to the home and to mothers than home influence," says Bertha Wood Larrabee. "The mother who has won and knows how to keep the confidence of her children has learned one of the most precious lessons of motherhood. It is one of the most natural things in the world for a child to trust and confide in its mother, and unless some barrier blocks the way, a child will always naturally and voluntarily make a confidant of its mother."

"The mother who begins with her children by allowing them—not teaching them, but just simply allowing them—of their own free will, to confide in her has a hold on her children that she will never lose. In order to keep the confidence of her children, let every mother prove herself worthy of confidence. Let her life be such that the child, even the baby, who learns sooner than we think, may see nothing but

what is pure and tender. Let him always find her full of sympathy and ready to listen to the childish stories. The mother who does this will know all that transpires in her child's life, not only when he is with her, but when he is out with other children; for the child mind will be so anxious that dear mamma shall know all that has happened that it will tell all with an innocence and trust that comes only with intimacy."

"When children return from their play, give them an opportunity to tell what they have been doing, and many a story of wrong innocently done will be as innocently related. Here, then, is the mother's opportunity; she may now tell her children of the wrong, show them why it was wrong, and she will still have their confidence; but if instead of receiving her children with loving arms and listening to their childish stories she has, perhaps rather harshly, told them to keep quite, and not to come where she was with their muddy boots, she has lost her best opportunity to know of the wrong that has been done; or if, upon hearing of that wrong, she has scolded them for their childish mistake she has lost their confidence, and the evil once committed will be more easily repeated, and when repeated will be concealed and the second step downward has been taken."

#### Hygiene for Women.

For the first time in the history of the University of California a woman is to give a course of lectures which will be a regular part of University work and count for credit toward a degree.

It is announced that Mrs. Mary Bennett Ritter, M. D., woman physician of the University of California, will offer a two-hour course in hygiene throughout the coming year. It will be her endeavor to teach the women students how to preserve their health and make their homes happy and wholesome. There will be lectures and recitations covering the general subject of food, personal, domestic and municipal hygiene. The lectures will be illustrated by diagrams, models, microscopical preparation and anatomical demonstrations. The first term will be devoted to instruction in personal hygiene, which will include the elements of histology, anatomy and physiology. The second term will be primarily devoted to instruction in the making of a sanitary home. Mrs. Ritter will lecture on house construction, ventilation, heating, plumbing, methods of preventing the spread of contagious diseases, the securing of pure water and the disposition of waste. The course will be free elective, open to all the women students.

#### The Manly Man.

His eyes, no matter, brown or blue,  
If only that those eyes are true;  
Mouth that smiles at a funny joke,  
But does not chew, and does not smoke;  
His teeth are white, untarnished, clean,  
He's clean without, within I ween;  
The tinge of health is on his cheek,  
He is not haughty, is not meek;  
With manner gentle as a child,  
To helpless things he's kind and mild;  
In homely joys he loves to share,  
And in his dealings he's "four square."  
Thus diligent on every hand,  
"Before the kings" this man shall stand,  
Noblest work of divinity plan:  
Best of all is the manly man.

#### A Life Saver.

The large pet dog of Charles Hagerman of Irishtown, Adams county, saved the life of his three-year-old son in a singular manner while the two were at play in the yard. The child had a chain fastened around its body and attached to the neck of the dog. They were strolling about, when the boy accidentally fell into the cistern, containing several feet of water. The dog, bracing himself for the shock, pulled on the chain with sufficient force to hold the child's head above the water. The pitiful cries of the boy were heard by a young lady residing with the family, who hastened to the scene, and rescued the little fellow from his perilous position.

#### Indian Baskets at the State Fair.

A display of Indian basket work will be made at the State Fair at Sacramento in September, which will be most interesting and instructive. The baskets are the work of Piute and Shoshone Indians, and represent the highest types of savage art, without any trace of the methods of the white man. Some of these baskets, not over 12 inches in diameter, sell for \$800. The various patterns on them are most ingeniously worked, and represent historical and mythological Indian traditions. The collection contains all classes of work: water baskets, medicine baskets, and those made partly with the glossy feathers of the drake's neck, or the red crest of the woodpecker. The collection is one of the most interesting in America.

#### True Charity.

Every good act is charity. Giving water to the thirsty is charity. Removing stones and thorns from the road is charity. Exhorting your fellow men to virtuous deeds is charity. Smiling in your brother's face is charity. Putting a wanderer in the right path is charity. A man's true wealth is the good he does in this world. When he dies mortals will ask what property has he left behind him, but angels will enquire, "What good deeds hast thou sent before thee?"—Mahomet.

### DOMESTIC ECONOMY.

#### Domestic Hints.

**BAKED MILK.**—This is very nourishing and excellent sauce for figs or prunes. Place one pint of milk in an earthenware jar, cover the top with stout white paper and bake gently for three hours. It will then be the consistency of cream.

**HUCKLEBERRY CAKE.**—To make it, pick over one and one-quarter cups of huckleberries, wash, dry and dredge them with flour. Cream together one-quarter cupful butter and one-half cupful of sugar. Add to it the beaten yolk of one egg and one cupful of milk. Stir into it a mixture of two cupfuls of flour, one-half teaspoonful of salt and two even teaspoonfuls of baking powder. Fold in the stiffly beaten white of the egg and add the berries last, being careful not to break them. Bake in muffin tins or a shallow pan for half an hour and serve hot.

**COFFEE MOUSSE.**—Heat together in a double boiler one and one-quarter cupfuls of sugar and one and one-half cupfuls of strong coffee. When the sugar is dissolved, add the yolks of six eggs and stir the mixture until it begins to thicken, when it must be removed quickly and stirred until cold. Fold in carefully one pint of cream whipped until it is dry; turn it into a mould and put on the cover. To prevent salt water from entering, paste a strip of buttered paper around the edge; pack it in cracked ice and salt so that it is completely buried, and leave it for four hours. When ready to serve, plunge the form quickly into hot water and turn it on to a plate.

**CHOCOLATE PUDDING.**—A quart of milk is put in a double boiler, and when it boils two squares of chocolate are added. The mixture is stirred constantly until the chocolate is dissolved, and then it is boiled for five minutes. Then it should be removed from the fire, and be allowed to cool for fifteen minutes. In the meantime the yolks of six eggs and the whites of two are beaten quite light, and eight tablespoonfuls of sugar and one of vanilla are mixed with them. When the milk is cool all the ingredients are combined and put in a pudding dish. It is to be baked in a moderate oven, and when it is firm in the center it is done. Put the pudding dish in a pan of water, and the custard will not get watery. Make a meringue of the remaining whites of eggs and four tablespoonfuls of sugar. Spread it on the pudding when it is baked, and return to the oven to brown a little.



## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Aug. 22, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Sept.	Oct.
Wednesday.....	75 1/4 @ 74 3/4	76 3/4 @ 75 1/4
Thursday.....	74 1/4 @ 73 3/4	75 3/4 @ 74 1/4
Friday.....	73 3/4 @ 72 3/4	74 3/4 @ 73 3/4
Saturday.....	71 3/4 @ 72 3/4	72 3/4 @ 73 3/4
Monday.....	72 3/4 @ 72	73 3/4 @ 72 3/4
Tuesday.....	71 3/4 @ 72	72 3/4 @ 73 3/4

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	Sept.	Dec.
Wednesday.....	6s 0 1/2 d	6s 1 1/2 d
Thursday.....	6s 0 d	6s 1 1/2 d
Friday.....	5s 11 1/2 d	6s 1 d
Saturday.....	5s 10 1/2 d	6s 0 1/2 d
Monday.....	5s 11 1/2 d	6s 0 1/2 d
Tuesday.....	5s 10 1/2 d	6s 0 1/2 d

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec. 1900.	May, 1901.
Thursday.....	1 10 3/4 @ 1 09 3/4	1 15 1/4 @ 1 15 3/4
Friday.....	1 09 3/4 @ 1 07 3/4	1 14 1/4 @ 1 13 3/4
Saturday.....	1 06 3/4 @ 1 08 3/4	@
Monday.....	1 08 @ 1 08 3/4	1 13 @
Tuesday.....	1 08 3/4 @ 1 09 3/4	1 13 3/4 @ 1 14 3/4
Wednesday.....	1 09 3/4 @ 1 10 3/4	1 15 3/4 @

## WHEAT.

Despite confirmation of previous reports that the wheat crop in the Dakota and Minnesota section, or what is known as the Middle West, is showing a decidedly heavy shortage, and notwithstanding the crop in this State is proving much lighter than was generally predicted and anticipated, the wheat market has been going from bad to worse much of the time since last review. In the speculative market there was a drop in this center of nearly 4c in December wheat from lowest figures of previous week, with still greater decline in the Chicago market, where the weakness was developed and was most pronounced. No substantial reason was given for the depression, as has often been the case on former occasions. Dull foreign markets gave a good opportunity for hammering down values, and manipulators saw fit to hammer them down, which is probably as correct a solution of the break in the speculative market as can be stated. Spot values did not recede so much as prices on Call Board, but there was naturally a soft feeling, and had there been any special selling pressure, prices for actual wheat would have been correspondingly low or lower than for futures. There has been some recovery from low-est figures of the week, but at best the condition of the market compares unfavorably with that experienced earlier in the month. The visible supply east of the Rockies is given at 49,761,000 bushels, being an increase for week of 1,543,000 bushels.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, \$1.06 1/2 @ 1.10 1/2.

May, 1901, delivery, \$1.13 1/2 @ 1.15 1/2.

Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at \$1.09 1/2 @ 1.10 1/2; May, 1901, \$1.15 1/2 @.

California Milling.....	\$1 05 @ 1 10
Cal. No. 1 shipping, alongside.....	1 03 3/4 @ 1 06 3/4
Oregon Valley.....	1 05 @ 1 07 1/2
Washington Blue Stem.....	1 05 @ 1 10
Washington Club.....	1 02 1/2 @ 1 07 1/2
Off qualities wheat.....	1 00 @ 1 02 1/2

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-1900.	1900-01.
Liv. quotations.....	6s 1d @ 6s 2d	6s 3d @ 6s 3 1/2 d
Freight rates.....	31 1/4 @ 33 3/4 s	37 1/4 @ 38 1/4 s
Local market.....	\$1 05 @ 1 07 1/2	\$1 03 1/2 @ 1 06 1/4

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

Trade has been light in this article during the current week, buyers as a rule not caring to purchase beyond most immediate needs, the condition of the wheat market affording poor encouragement for stocking up ahead. When conditions are seemingly the worst, however, often proves subsequently to have been the most opportune time for purchasing. Both the export and local orders have been lately rather light in the aggregate. Spot supplies are of very fair proportions.

Superfine, lower grades.....	\$2 25 @ 2 50
Superfine, good to choice.....	2 60 @ 2 80
Country grades, extras.....	3 15 @ 3 40
Choice and extra choice.....	3 40 @ 3 65
Fancy brands, jobbing.....	3 60 @ 3 75
Oregon, Bakers' extra.....	2 90 @ 3 25
Washington, Bakers' extra.....	2 90 @ 3 40

## BARLEY.

Two ships clearing the past week for United Kingdom had Barley as principal cargo, and there is more of this cereal now going aboard vessels for Europe. While the market has shown some weakness since last review, largely in sympathy with wheat, the weakness has been confined more to feed descriptions than to the better grades of either Brewing or Chevalier. Choice to select Chevalier is in light stock and is likely to be all wanted for export. High grade Brewing is not plentiful, nor is it being urged to sale at what could be termed easy figures. Feed descriptions are in quite liberal supply as compared with the demand.

Feed, No. 1 to choice.....	72 1/4 @ 75
Feed, fair to good.....	67 1/4 @ 70
Brewing, No. 1 to choice.....	82 1/4 @ 87 1/4
Chevalier, No. 1 to choice.....	92 1/4 @ 97 1/4
Chevalier, No. 2.....	80 @ 85
Chevalier, poor.....	72 1/4 @ 75

## OATS.

The market is no more favorable to buyers than last quoted, but the demand at extreme figures generally insisted upon is not brisk, most buyers now being inclined to confine their purchases to immediate requirements. Choice to select white Oats are in lightest stock and market for this description shows most strength. For some extra fancy Puget sound as high as \$1.45 has been realized. Grays, Blacks and Reds are in fair supply.

White Oats, fancy feed.....	1 30 @ 1 35
White, good to choice.....	1 20 @ 1 27 1/2
White, poor to fair.....	1 10 @ 1 17 1/2
Gray, common to choice.....	1 12 1/2 @ 1 20
Milling.....	1 25 @ 1 40
Surprise, good to choice.....	1 25 @ 1 35
Black Russian.....	1 05 @ 1 20
Red.....	1 07 1/2 @ 1 25

## CORN.

Spot stocks are of light volume and are mostly large Corn from the East. Values keep at a comparatively high range, but demand is not very active at current rates, and business is mostly of a small jobbing character.

Large White, good to choice.....	1 22 1/2 @ 1 25
Large Yellow.....	1 20 @ 1 22 1/2
Small Yellow.....	1 50 @
Eastern, in bulk (carload lots).....	1 15 @ 1 17 1/2

## RYE.

Quotable values remain about as last noted, with no evidence of any extensive trading, either on foreign or local account. Market shows an easy tone.

Good to choice, new..... 87 1/4 @ 92 1/4

## BUCKWHEAT.

Market is virtually bare of supplies and values are consequently nominal for the time being.

Good to choice.....	1 90 @ 2 00
Stiverskin.....	@

## BEANS.

New crop Beans will soon be on the market in quotable quantity, and on this account buyers are as a rule holding off, purchasing only as compelled to and then as lightly as possible. Small Whites are firm. For other kinds values remain fairly steady, there being no heavy stocks. The coming crop will not prove large in the Sacramento river section. In the southern part of the State there will be a fair yield of Limas, but few beans of any other sort.

Pea, fair to good, 100 lbs.....	@
Small White, good to choice.....	3 75 @ 4 00
Lady Washington.....	3 00 @ 3 25
Butter, small.....	@
Butter, large.....	@
Pinks.....	2 65 @ 2 85
Bayos, good to choice.....	2 65 @ 2 85
Reds.....	3 25 @ 3 75
Red Kidneys.....	@
Limas, good to choice.....	5 25 @ 5 35
Black-eye Beans.....	3 25 @ 3 50
Horse Beans.....	1 75 @ 2 25
Garbanzos, large.....	2 50 @ 2 75
Garbanzos, small.....	2 00 @ 2 25

Recent advices by mail from New York give the following report of the Bean market, prices quoted being per 60-pound bushel.

The lower range of prices quoted of late has not seemed to be any more attractive to buyers, and the trade has not enlarged in any direction. Exporters especially were disinterested. Rather more stock has arrived and this has made enough pressure to sell to keep values for most varieties on the downward turn. Medium and Pea have been particularly dull and more than 5c. lower than last week. At the close the best marks of Medium are offering at \$1.82 1/2 @ 1.85, and the choicest Pea at \$2.02 1/2 @ 2.05, with some fine lots to be had at \$2. Marrow show more steadiness than other kinds, and really fine lots are held generally at \$2; some very good stock is obtainable at \$1.95. Red Kidney have dragged heavily and any price above \$1.85, shippers' terms, would certainly be very extreme; some small lots of desirable quality have been sold to dealers for considerable less money. White Kidney quiet and unchanged. Yellow Eye a little

easier and slow. Turtle Soup have had no demand except to speculative buyers, and they have been paying about \$2.20. Lima fairly sustained at \$3.50 @ 3.55. Out-of-town trade has taken a fair quantity of foreign beans, but holders have been anxious to sell and have made further concessions in price. Green and Scotch peas closing a little easier.

## DRIED PEAS.

In other than a very small jobbing way, there is nothing doing in this line. Values are largely nominal, remaining as previously quoted.

Green Peas, California.....	2 40 @ 2 50
Nites Peas.....	2 15 @ 2 25

## WOOL.

Market has continued quiet since last review, but in quotable values there is no change to record. It is the general impression that current rates will be maintained on all good to choice wools, and that if there is any special shading of prices in favor of buyers, it will be on undesirable stock. While there is nothing to indicate when activity will be resumed, the near future will likely witness more or less movement. Local scourers are expected to soon commence operations.

## SPRING.

Humboldt and Mendocino.....	16 @ 18
Northern, free.....	14 @ 16
Northern, defective.....	11 @ 13
Middle Counties, free.....	14 @ 16
Middle Counties, defective.....	11 @ 13
Southern Mountain, 12 mos.....	8 @ 10
Southern Mountain, free, 7 mos.....	9 @ 11
Southern Mountain, defective, 7 mos.....	8 @ 10
Oregon Valley, fine.....	17 @ 19
Oregon Valley, coarse to medium.....	16 @ 17
Eastern Oregon, choice.....	15 @ 16
Eastern Oregon, fair to good.....	11 @ 14
Nevada, as to condition.....	14 @ 16

## FALL.

San Joaquin.....	7 1/2 @ 10
San Joaquin Lambs.....	8 @ 9

## HOPS.

Spot stocks are too small to admit of any special activity, and it is not likely there would be any great demand for old hops at this late date, in other than a speculative way, even if they were obtainable in wholesale quantity. New crop hops are in fair request to arrive, dealers naming 10 @ 12c. for good to choice, delivered at this center.

Good to choice, 1899 crop..... 7 @ 10

The following review of the Hop market, issued by a New York authority, comes through by mail of recent date.

The unexpected liberal arrivals are upsetting the calculations of holders. Sixteen hundred bales for the first two weeks in August is very unusual. So much of this stock has come forward, mostly from the Pacific coast, that it has prevented as rapid reduction of local stocks as dealers would like to see near the close of the season. Brewers have had to make some purchases, the exceedingly warm weather making a large consumption of liquors, but they have felt inclined to work down their own stock to a low point, as the quality of last year's crop will probably be no comparison to the 1900 crop, which promises to be fine. We do not think the situation warrants any change in quotations for State hops, but the better grades of Pacific coast are slightly easier, and 13 @ 13 1/2c. is a full price for choice. Crop reports in this country are about the same as last year, but late London cables report continued unfavorable weather and crop not doing well. In the interior of this State a few bales of seedlings have been picked, and buyers were found at 19c. for Palmers and 18c. for Wests. After last year's experience we advise farmers not to pick until the hops are fully ripe; and in New York State we hope to see the crop harvested in better shape than last year, which was the dirtiest crop ever picked in this country.

## HAY AND STRAW.

Arrivals of hay have shown some decrease, as compared with several weeks preceding, but are still proving of liberal proportions and are considerably above the weekly average for years past. In quotable values there are no declines to record, but market has not been firm at full figures, especially for ordinary grades, or other than choice to select Wheat and mixed Wheat and Oat.

Wheat.....	8 00 @ 12 00
Wheat and Oat.....	8 00 @ 11 00
Oat.....	7 00 @ 10 00
Barley.....	5 50 @ 8 50
Volunteer.....	4 50 @ 6 50
Alfalfa.....	6 00 @ 7 50
Stock.....	5 00 @ 6 50
Compressed.....	8 00 @ 12 00
Straw, per bale.....	25 @ 37 1/2

## MILLSTUFES.

Market was amply supplied with Bran, Middlings and Shorts, the demand being only moderate, and prices remained practically as last noted. Rolled Barley ruled fairly steady. Milled Corn was held as a rule at full current rates.

Bran, per ton.....	12 00 @ 13 00
Middlings.....	15 00 @ 18 00
Shorts Oregon.....	13 00 @ 15 00
Barley, Rolled.....	16 50 @ 17 00
Cornmeal.....	25 00 @ 25 50
Cracked Corn.....	26 50 @ 27 00

## SEEDS.

Very little new crop Mustard Seed is offering, with market firm and likely to continue against buyers throughout the season. Other seeds quoted herewith are making a slim showing, with values in practically same position as last quoted.

Mustard, Trieste.....	3 00 @ 3 25
Mustard, Yellow.....	4 00 @ 4 25
Flax.....	2 10 @ 2 50

Canary.....	3 1/4 @ 4
Rape.....	2 @ 3
Hemp.....	3 1/4 @ 4
Timothy.....	@
Alfalfa, Utah.....	@

## BAGS AND BAGGING.

There is very little doing in Grain Bags, as is generally the case at this date. The market is weak at the decline last quoted, with much larger supplies now remaining than will be possibly absorbed by Oregon and Washington, where most of the inquiry will come from during the balance of the year. Fruit Sacks are meeting with fair request at steady figures. Bean Bags are beginning to receive attention, with supplies ample for all probable requirements.

Calcutta Grain Bags, buyer June-July.....	@
Calcutta Grain Bags, spot.....	5 1/2 @ 6
San Francisco Grain Bags, 22x36, spot.....	5 1/2 @ 6
State Prison Bags in lots of 2000, per 100.....	5 65 @
Wool Sacks, 4 lbs.....	@ 3 1/2
Wool Sacks, 3 1/2 lbs.....	@ 2 3/4
Fleece Twine.....	7 1/2 @
Gunnies.....	@ 12 1/2
Bean Bags.....	4 1/2 @ 5 1/4
Fruit Sacks, cotton.....	6 1/4 @ 7 1/4

## HIDES, PELTS AND TALLOW.

Dullness continues to be experienced in the Hide and Pelt market, with nothing at the moment to warrant anticipating very soon any pronounced change for the better. Market for Tallow is fairly steady, the demand being sufficient to prevent serious accumulations.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	9 1/4	8 1/4
Medium Steers, 48 to 56 lbs.....	8 1/4	7 1/4
Light Steers, under 48 lbs.....	8 1/4	7 1/4
Heavy Cow Hides, over 50 lbs.....	8 1/4	7 1/4
Light Cow Hides, under 50 lbs.....	8 1/4	7 1/4
Wet Salted Kip.....	8 1/4	7 1/4
Wet Salted Veal.....	8 1/4	7 1/4
Wet Salted Calf.....	9	8
Dry Hides.....	15	12
Dry Kip and Veal, 11 to 16 lbs.....	15	12
Dry Calf, under 4 lbs.....	15	12
Salted Horse Hides, large.....	2 00 @	@
Salted Horse Hides, medium.....	1 50 @	@
Salted Horse Hides, small.....	1 00 @	@
Dry Horse Hides, large.....	1 50 @	@
Dry Horse Hides, small.....	75 @ 1 00	@
Dry Cotts' Hides.....	50 @	@
Pelts, long wool, per skin.....	1 00 @ 1 25	@
Pelts, medium, per skin.....	70 @ 90	@
Pelts, short wool, per skin.....	35 @ 60	@
Pelts, shearling, per skin.....	30 @ 35	@
Deer Skins, best summer.....	27 1/2 @ 30	@
Deer Skins, good medium.....	20 @ 22 1/2	@
Deer Skins, thin winter.....	@ 10	@
Eik Hides.....	10 @ 12	@
Tallow, good quality.....	4 @	@
Tallow, No. 2.....	3 @ 3 1/4	@
Goat Skins, perfect.....	30 @ 37 1/2	@
Goat Skins, damaged.....	10 @ 20	@
Kid Skins.....	5 @ 10	@

## HONEY.

Stocks continue light, and market inclines in favor of sellers. Indications are that the yield in this State is one of the smallest on record. Most of the business is of a light jobbing character, necessarily so on account of the limited offerings. Water white honey remains in slim supply, and dark honey is also scarce, spot supplies being principally amber.

Extracted, White Liquid.....	7 1/4 @ 8
Extracted, Light Amber.....	6 1/4 @ 7 1/4
Extracted, Amber.....	5 1/4 @ 6
White Comb, 1 lb frames.....	12 @ 12 1/2
Amber Comb.....	9 @ 11
Dark Comb.....	6 1/4 @ 7 1/4

## BEESWAX.

There is little coming forward from any quarter, and no lack of inquiry for desirable qualities at full current rates.

Good to choice, light, per lb.....	26 @ 28
Dark.....	24 @ 25

## LIVE STOCK AND MEATS.

Market for Beef shows fairly healthy condition, the last quoted improvement continuing in force, with good demand for No. 1 to choice. Neither Mutton nor Lamb is offering in excessive quantity, and is commanding fully as good figures as for a week or two preceding. Large Veal is in ample supply for current needs. Small Veal is in very light receipt. Hogs



are not arriving freely and are meeting with a firm market, the supply being hardly sufficient for immediate needs.

Beef, first quality, dressed, net lb.	6 @ 6 1/4
Beef, second quality	5 1/2 @ —
Beef, third quality	5 @ —
Mutton—ewes, 7@7 1/2c; wethers	7 1/2 @ 8
Hogs, hard grain fed, medium	6 1/2 @ 6
Hogs, small, fat	5 1/2 @ 6
Hogs, large, hard	5 1/2 @ —
Hogs, acorn-fed	— @ —
Hogs, feeders	5 1/2 @ 5 1/2
Hogs, country dressed	6 @ 6 1/4
Veal, small, lb.	8 @ 10
Veal, large, lb.	8 @ —
Lamb, spring, lb.	8 @ 9

## POULTRY.

Changes since last review in the general tone and quotable rates have not been numerous or marked. Choice stock, both old and young, was in fair request at much the same prices as current the preceding week. Young fowls in fine condition naturally received the preference. Common old Hens were neglected by most buyers, even at low figures.

Turkeys, dressed, lb.	— @ —
Turkeys, live hens, lb.	10 @ 11
Turkeys, live gobblers, lb.	9 @ 10
Hens, California, lb. dozen	3 50 @ 5 00
Roosters, old	3 50 @ 4 00
Roosters, young (full-grown)	3 50 @ 5 00
Fryers	3 00 @ 3 50
Broilers, large	2 50 @ 3 00
Broilers, small	1 75 @ 2 50
Ducks, old, lb. dozen	3 00 @ 4 50
Ducks, young, lb. dozen	3 00 @ 4 50
Geese, pair	1 25 @ 1 50
Goslings, pair	1 50 @ 1 75
Pigeons, old, lb. dozen	1 50 @ 1 75
Pigeons, young	1 50 @ 1 75

## BUTTER.

There have been no appreciable changes in quotable rates for fresh butter, either creamery or dairy product, since last report, but for other than most select the demand was slow and market could not be termed firm. Most of the retailers, especially the larger ones, have considerable held stock of their own, which they are now beginning to draw from.

Creamery, extras, lb.	24 @ 25
Creamery, firsts	22 1/2 @ 23 1/4
Creamery, seconds	21 1/2 @ 22 1/4
Dairy, select	22 1/2 @ —
Dairy, seconds	19 @ 21
Dairy, soft and weedy	— @ —
Mixed store	15 @ 16
Creamery in tubs	20 @ 22
Pickled Roll	20 @ 21
Firkin, California, choice to select	20 @ 21
Firkin, common to fair	17 @ 18

## CHEESE.

Market presents a little better tone, although in the matter of quotable rates there have been no decided alterations effected. Receipts and offerings have been lately showing some decrease, while inquiry continues fully as good as at any time for a month or more past.

California, fancy flat, new	10 @ —
California, good to choice	9 @ 9 1/2
California, fair to good	8 1/2 @ 9
California Cheddar	— @ —
California, "Young Americas"	9 1/2 @ 11

## EGGS.

There are not many choice to select fresh eggs now coming forward, but demand for them is not brisk, and they are not commanding what can be termed very firm figures, although in a small way they are going to special custom at a moderate advance on quotable rates. Most of the trade at present is in Eastern and cold storage eggs, these being in liberal stock and are selling at comparatively low values.

California, select, large, white and fresh	24 @ 25
California, select, irregular color & size	21 @ 23
California, good to choice store	16 @ 19
Eastern, as to section and grading	15 1/2 @ 19
Eastern, cold storage	— @ —

## VEGETABLES.

The market for most kinds of vegetables has ruled quiet, and it was the exception where the quantity was not ample for the requirements. Onions were quotably lower than last noted, but there was a fair demand at the easier figures current. Wax and Lima beans were in more liberal supply than preceding week. Tomatoes sold at materially lower figures, owing to decided increase in receipts.

Beans, String, lb.	3 @ 4
Beans, Wax, lb.	3 @ 4
Beans, Lima, lb.	3 @ 4
Cabbage, choice garden, lb. 100	1 00 @ 1 25
Cauliflower, lb. dozen	50 @ —
Cucumbers, Bay, lb. box	25 @ 40
Egg Plant, lb. box	50 @ 75
Garlic, lb.	2 1/2 @ 3
Green Corn, lb. sack	75 @ 1 00
Green Corn, Alameda, lb. crate	1 00 @ 1 50
Onions, Yellow Danver, lb. cental	50 @ 65
Okra, Green, lb. box	40 @ 60
Peas, Sweet, garden, lb.	3 @ 4
Peppers, Green Obile, lb. box	40 @ 65
Peppers, Bell, lb.	40 @ 65
Pickle Cucumbers, No. 1, lb. box	50 @ 75
Pickle Cucumbers, No. 2, lb. box	40 @ 60
Squash, Summer, lb. large box	35 @ 50
Tomatoes, River, lb. large box	25 @ 50

## POTATOES.

Arrivals from Sacramento river section

were considerably larger than for a week or two preceding, and market was not particularly firm, although good shipping stock met with fair custom at the prevailing figures. Salinas Valley Burbanks were in rather limited receipt and brought in a small way tolerably stiff figures, some transfers of selected lots being reported at an advance on extreme quotation below noted.

Burbanks, River, lb. cental	40 @ 60
Burbanks, Salinas, lb. cental	70 @ 1 00
Sweet Potatoes, Yellow, lb. cental	1 25 @ 2 00

## The Fruit Market.

## FRESH FRUITS.

In a general way the market for fresh fruits continued on much the same lines as preceding week. Such changes as were effected in quotable rates, however, were in the main to firm rather than to easier prices. Apples of high grade were not plentiful and tended in favor of the selling interest, but common qualities were plentiful and slow of sale at low prices. Bartlett Pears which were sound and of good size were quotable at \$25 per ton and were favored with prompt custom, offerings of this description being light. Wormy, scaly, small or otherwise inferior Pears were offered down to \$10 per ton. Peaches of prime to select quality did not lack for custom, and tendency was to better average prices than had been current. Plums were in less excessive receipt than they had been, but offerings were ample and prices remained unimproved. Grapes were in fairly liberal supply and there was an easy tone to the market for table varieties. Wine Grapes moved rather slowly in the local market. Figs were not in large receipt, but did not command any better figures than last quoted. Melons of all kinds were in improved request and brought firmer prices, owing to warmer weather. Berries were in decreased supply and in consequence sold to slightly better advantage, although demand was not very brisk.

Apples, fancy, 4-tier box	1 00 @ 1 25
Apples, good to choice, lb. 50-lb box	60 @ 90
Apples, common to fair, lb. 50-lb box	25 @ 50
Apples, Crab, lb. box	25 @ 50
Blackberries, lb. chest	3 50 @ 5 00
Cantaloupes, lb. crate	75 @ 1 25
Figs, lb. 1-layer box	25 @ 50
Figs, lb. 2-layer box	40 @ 75
Grapes, Tokay, lb. box	40 @ 65
Grapes, Seedless Sultana, lb. crate	50 @ 75
Grapes, Fontainebleau, lb. crate	35 @ 50
Grapes, Rose of Peru, lb. box	35 @ 50
Grapes, Black Hamburg, lb. box	35 @ 50
Grapes, Muscat, lb. box	35 @ 50
Raspberries, lb. chest	5 00 @ 8 00
Logan Berries, lb. chest	— @ —
Nectarines, Red, lb. box	40 @ 60
Nectarines, White, lb. box	35 @ 50
Nutmeg Melons, lb. crate	35 @ 60
Plums, ordinary varieties, lb. box	25 @ 40
Plums, fancy, lb. box	50 @ 65
Prunes, lb. crate	30 @ 50
Plums, as to size, lb. ton	7 00 @ 15 00
Peaches, lb. box	25 @ 50
Peaches, wrapped, lb. box	60 @ 75
Peaches, Cling, lb. ton	15 00 @ 25 00
Peaches, Freestone, lb. ton	15 00 @ 25 00
Pears, Bartlett, lb. box	40 @ 1 00
Pears, Bartlett, lb. ton	12 50 @ 25 00
Pears, common kinds, lb. box	25 @ 65
Strawberries, Longworth, lb. chest	5 00 @ 8 00
Strawberries, Large, lb. chest	3 00 @ 6 00
Whortleberries, lb.	5 @ 6
Watermelons, lb. 100	10 00 @ 22 50

## DRIED FRUITS.

In the market for cured and evaporated fruits, Peaches have been the center of attraction with buyers the current week. As one dealer fittingly remarked, the present might be termed Peach week. While market for this fruit could not be said to be quotably higher, it was firm, with tendency of values on the up grade. There was considerable outward movement, mainly to Eastern points. Most of the Eastern business was on basis of 5 1/2c. for No. 1 stock in sacks, f. o. b. cars at common shipping points. Purchases were made by local operators at higher figures, mainly in a speculative way, in anticipation of a firmer market later on. The output of dried Peaches in this State promises to be materially lighter than was generally estimated before the season opened. While there was good demand for all desirable qualities of Peaches, inquiry was most active and competition most pronounced on strictly choice to select, the latter sort bringing above quotable rates. Apricots are ruling more quiet, but are not a whit more favorable to buyers than last noted. Some of superior quality are held above quotations; especially is this the case with choice to fancy Moorpark, market for this description being decidedly strong. In Apples there is little doing, and not much spot stock to operate upon, prices remaining as before. Fig market shows firmness for the best qualities of pressed, with most of the season's output already in second hands. Market for Pears has not yet fairly opened; while common to medium grades may prove plentiful, it is safe to predict there will be no surplus of fancy

stock, and that this sort will bring good prices, without the necessity of going begging for custom. In Pitted Plums little has yet been done, and prices remain quotably as last stated. New crop Prunes are still without quotations. The Association has made its allotments, and is expected to have named prices by the time this issue reaches our readers. Some Prunes outside of the Association are being offered on the basis of 2 1/2c. for the four sizes.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime	6 @ 6 1/2
Apricots, Royal, choice, in sacks, lb.	7 @ 7 1/2
Apricots, Royal, fancy	9 @ —
Apricots, Moorpark	10 @ 12 1/2
Apples, in 50-lb boxes, rings, pressed, fancy	5 1/2 @ 5 1/2
Apples, 50-lb boxes, rings, pressed, good to choice	4 @ 4 1/2
Figs, White, fancy pressed	5 1/2 @ 6 1/2
Nectarines, lb.	5 @ 6
Peaches, unpeeled, fancy	6 1/2 @ 7 1/2
Peaches, unpeeled, choice	5 1/2 @ 6
Peaches, peeled, in boxes	12 @ 15
Pears, unpeeled Bartletts, halved, fancy	7 1/2 @ 8
Pears, halved, unpeeled Bartletts	5 1/2 @ 6 1/2
Pears, quartered, unpeeled Bartletts	5 @ 6
Plums, Black, pitted	5 1/2 @ 6 1/2
Plums, White and Red	6 1/2 @ 7 1/2
Prunes, in sacks 40—50s.	— @ —
50—60s	— @ —
60—70s	— @ —
70—80s	— @ —

Prunes in boxes, 1/2c higher for 25-lb boxes, 1/2c higher for 50-lb boxes.

Prunes, Silver

## COMMON SUN-DRIED.

Apples, sliced	3 @ 3 1/2
Apples, quartered	3 1/2 @ 4 1/2
Figs, Black	2 @ 3
Figs, White	3 @ 3 1/2
Peaches, unpeeled	4 1/2 @ 5

Advices by recent mail from New York furnish the following report of the Dried Fruit market in the East:

The market for spot evaporated Apples has shown no improvement; there is a very light jobbing trade passing and the few transactions reported are within ranges quoted. Interest in evaporated for future delivery has fallen off and market has weakened to 4 1/2c. for prime, October or November delivery, and little business reported toward the close. Sun-dried Apples are very quiet and quotations little more than nominal. Chops have a possible value above \$1 for fancy, but that figure generally top, and defective stock ranging down to 50@75c.; demand very limited. Cores and skins have a fair amount of attention and tone steady. Last sales of old Raspberries were 15@16c., but a good sized lot of new in at the close offered at 15c. without attracting attention, and new sun-dried are quoted nominally at 11@12c. Huckleberries held at 12c., but that figure extreme. Small sales of Blackberries reported at 5@5 1/2c., generally latter figure, and Cherries are offered at 9 1/2@10c. without attracting buyers. California Apricots have arrived very freely, large quantities passing through here in transit for export; advices report strong market on the coast and stock is held firmly here, generally at 8 1/2c. for best stock either in cases or bags. California Peaches quiet and not much interest in Prunes.

Apricots, Cal., 1900, lb. 7 1/2 @ 8 1/2  
Peaches, Cal., unpeeled, in bxs, lb. 7 @ 8  
Peaches, Cal., unpeeled, in bags, lb. 6 @ 7 1/2  
Prunes, Cal., lb. 4 1/2 @ 6 1/2

## RAISINS.

Stocks of 1899 Raisins are nearly exhausted and are meeting with fair inquiry in a small way. There are few other than common Orientals and Pacifics now offering. If desirable qualities were obtainable, there would be more movement. Prospects are favorable for new crop meeting with a firm market. The Raisin Grape yield will be much lighter than last season, and more than the usual proportion will likely go to wineries, the latter paying comparatively good prices.

## CITRUS FRUITS.

Lemons have been in fairly good request, especially the better qualities, but prices were without improvement, supplies proving ample. Limes are quotably lower, the latest arrival showing poor average condition.

Oranges—Navels, fancy lb. box	— @ —
Navels, good to choice	— @ —
Navels, common to fair	— @ —
Valencias	1 50 @ 3 00
St. Michaels	1 50 @ 2 75
Mediterranean Sweet	1 50 @ 2 50
California Seedlings	— @ —
Lemons—California, select, lb. box	3 50 @ —
California, good to choice	2 50 @ 3 00
California, common to fair	1 50 @ 2 50
Limes—Mexican, lb. box	5 50 @ 6 50
California, small box	— @ —

## NUTS.

There are few almonds offering from first hands and market is strong at prevailing figures, especially for choice shelled stock. Values for new Walnuts have not yet been established, but a large portion of the crop has been already engaged, prices to be fixed the coming month. French Walnuts are reported being of

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ferred at 8@10c. as to quality, New York delivery.

California Almonds, shelled	22 1/2 @ 25
California Almonds, paper shell, lb.	12 1/2 @ 13 1/2
California Almonds, soft shell	10 @ 11
California Almonds, hard shell	6 @ 7
Walnuts, White, soft shell	— @ —
Walnuts, White, California, standard	— @ —
Chestnuts, California Italian	— @ —
Peanuts, California, fair to prime	5 @ 6
Peanuts, Eastern, band-picked	6 @ 6 1/2
Pine Nuts	5 @ 6

## WINE.

The wine grape market is firm, with demand good, and large quantities have already passed into second hands, several of the large wine dealers of this city being the principal purchasers. In the Sonoma valley \$23 per ton is being paid for choice grapes, either red or white, for dry wines. In the Santa Clara valley, grapes for dry wines are quotable at about \$20 per ton, and in the Fresno district at about \$18 per ton for grapes for dry wines, and about \$16 per ton for sweet wine grapes. The last Panama steamer carried 128,637 gallons and four cases wine, the larger portion being destined for New York.

## California Dried Fruit at New York.

NEW YORK, Aug. 23.—Evaporated apples, common, 3 1/2@4 1/2c; prime wire tray, 4 1/2@5 1/2c; choice, 5 1/2@6c; fancy, 6 1/2@7c. California dried fruits.—Little spot stocks of new, aside from Apricots, latter ruling firm. Prunes, 3 1/2@7c. Apricots, Royal, 11@14c; Moorpark, 15@17c. Peaches, unpeeled, 6@9c; peeled, 14@18c.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, 1/2 sacks	96,431	748,878
Wheat, centals	121,211	806,124
Barley, centals	147,094	757,769
Oats, centals	30,485	145,903
Corn, centals	1,550	8,407
Rye, centals	4,720	8,925
Beans, sacks	1,140	18,742
Potatoes, sacks	30,113	171,137
Onions, sacks	4,375	25,731
Hay, tons	5,202	31,969
Wool, bales	611	3,899
Hops, bales	89	289

## EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, 1/2 sacks	32,988	392,528
Wheat, centals	96,918	774,990
Barley, centals	132,752	389,860
Oats, centals	627	22,589
Corn, centals	—	—
Beans, sacks	30	2,842
Hay, bales	1,252	1,417
Wool, pounds	—	233,621
Hops, pounds	2,177	9,560
Honey, cases	22	188
Potatoes, packages	1,655	3,794



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## FRUIT MARKETING.

### California's Advantages in the Prune Product.

W. H. Mills of San Francisco has been in Paris during the Exposition and has had opportunity to look into other things of interest to California fruit growers. In a letter to the Evening Post he makes these points:

California and France are both large producers of prunes. Mr. Martin, the general manager of the American line, says that formerly all the steamship lines, and his own in particular, carried a vast tonnage of prunes from Bordeaux, in France, to the Atlantic seaports in America; that this tonnage has almost entirely disappeared; that he had personally investigated the reason for the subsidence of the tonnage and found it referable to the prune production of California. He had personally visited the prune producing sections of France and found the universal testimony to be that France can not hold the American markets for prunes as against the social, industrial and economic conditions of California.

**FRENCH TAXATION.**—This statement of the steamship manager led me to an investigation of the facts. The first unfavorable condition on the French side encountered was the rate of taxation. Our people will scarcely be prepared to accept the statement that taxes in France upon agricultural industries average 12% of the gross product of agriculture. The system of taxation reaches the question of the value of the annual output, and I was informed by the professor of agriculture in one of the leading universities of France that the taxes in some districts of France rose to 18%.

Last year the Santa Clara valley produced \$3,000,000 worth of prunes. Applying the French rate of taxation, the average of 12% to this gross product, and you have \$360,000. This sum may be 25% of the net profit of the industry. It may be even more. I have not the data for exact calculation; but it is apparent on its face that if Santa Clara valley had been obliged to pay to the government of California \$360,000 for the privilege of raising prunes, the competing nation would have enjoyed a corresponding advantage in the competitive race.

**EFFICIENCY OF LABOR.**—The second factor considered was the relative efficiency of the labor employed. I have here a panoramic picture of Vacaville, embracing about 20 square miles of orchard in a single view. The horticulturists who have visited this office, and they are men who understand this subject thoroughly, have been constantly surprised at the smallness of the population in that valley, and wholly unable to understand where we find the labor equal to the task of cultivating so large an area of orchard.

Avoiding too much detail and employing the more direct method of going to conclusions, I am persuaded that the labor employed in the growing of fruit in California is relatively cheaper than that employed in France, notwithstanding the vast disparity of the rate of wages paid; and this difference arises out of the relative difference in the productive capacity of the two classes of laborers.

**CLIMATIC CONDITIONS.**—A third factor, which is, perhaps, even more important than the two already mentioned, relates to the difference in the productiveness of the orchards over a period of ten or twenty years. We have no winter which kills the bearing spurs. Our danger is from over-bearing, as that relates to prunes and plums. At long intervals we have late

frosts, which reduce the prune crop, but never wholly destroy it. It serves the purpose of thinning the trees; but over a period of twenty years we will raise from six to seven more full crops than can be raised in France. Here there is a regularly recurring shy season, due to the severity of winter.

These three factors—the rate of taxation, the disparity in the efficiency of the labor, the difference in the natural productiveness of the soil and climate—will sustain us supremely in the American market for prunes.

Mr. Mills should have also mentioned the cheapening of the product by the wonderfully capacious and efficient machinery which Californians have invented, and the cheapness, also, of the glorious sunshine and dry air with which the Almighty has endowed California.

### Fish-Eating Sheep.

On the islands off the coast of Maine there is a breed of sheep kept which eats fish and does well on them. The fish pomace—that is, the residue of the fish oil factories—is also eaten by these sheep, which do well on the food. The coast of Maine is lined with islands, large and small, but mostly small, from the size of a few acres up, and sheep are kept very successfully on these islands feeding on the seaweed thrown up by the waves and the refuse of fish from the fisheries. It costs but little to feed sheep on this island range, on which there is good grass through the summer and plenty of seaweeds in the winter. There is a small fish known as the tommycod, large numbers of which are at times thrown up on the rocks by the waves; and these fish, together with the weeds also drifted on the shores by the higher tides, sustain the sheep without any other food during the winter when there is no grass, but only hay. Another fish is the frost fish, and these, as also the tommycod, may be purchased for 50 cents a barrel, one barrel feeding three sheep through the winter. Fish may be bought for \$8 a ton, one ton feeding sixteen sheep during the winter. On this feed the sheep yield a fleece of from four to seven pounds of a good quality of wool. These small fish, when put up in tin boxes, are the common sardines, of which those persons who eat them as a luxury never think of the source, nor of the fact that what they consume as a luxury is the main support of the island sheep of Maine.



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forest reserve of California, beginning in the north, as the season will permit, in order to determine the feasibility and cost of making a forest working plan for that section of the reserve. Such a working plan would be a detailed and scientific programme for managing the reserve and harvesting its timber crop in such a way that the forests and their productive power would be maintained. This would imply the careful regulation of cutting and grazing, the adaptation of a system of protection from fire and trespass to the needs of each locality, and provision for the maintenance of the water supply in the regions dependent on the reserve for irrigation. It would make it possible to bring the reserve to the point of highest usefulness under skilled and farsighted management. Unlike much of the reserved land in California, a good deal of the region in the northern part of the Sierra reserve, which is within the range of the Bigtree and the upper limit of which is the southern boundary of the famous Yosemite National Park, is heavily timbered. A working plan would, therefore, provide not so much for the production of forest growth as for its maintenance.

In addition to this, Mr. Sudworth will make a special study of the effects of grazing on the forests, and, as a part of the co-operative work of the Division of Forestry and the U. S. Geological Survey, will gather material for a report on the composition and stand of timber in the reserve and its commercial importance, the classification of the various lands, and the origin, extent and character of fires.

### FORESTRY.

#### Students of Forestry.

The great number of applications for the position of student assistant under the Division of Forestry which have this year been made shows how rapidly the interest in practical forestry is increasing. The pay, \$25 a month and expenses in the field, is not enough to be alluring to those who are not interested in the subject, and no attempt to advertise the opportunity has been made. Yet, although it was announced early in March that more candidates had already applied than were places for, the number of applications kept steadily increasing, until finally 232 were received. This number is more than seven times as great as that of last year's, the first year's applications—35. In these applications it is noticeable that the majority come from in or near the large universities, where information regarding the opportunity, which had to be spread chiefly by word of mouth, could circulate extensively. From Harvard and Yale alone 100 were received, while 77 more were scattered over different parts of the Atlantic States. Sixteen came from California, where several students from Berkeley and Stanford had appointments last summer. If this information could have been spread throughout the Middle States as easily as it was in the neighborhood of these larger universities, the number of applications would probably have been still greater.

The position of student assistant was created for the double purpose of giving young men who are thinking of engaging in forestry as a profession practical experience and assistance under the supervision of experts, and of securing intelligent assistance for the Government at slight cost. In all 61 applicants were appointed and are now at work. They are divided up among the field experts who are making investigations and forest surveys as follows: In the State of Washington, 7; in California, 13; in the Black Hills, 9; in the Middle West, 5; in Arkansas, 10; in the Appalachian region, 2; in the Adirondacks, 15. Most of their time is spent in collecting the measurements of trees and in making the surveys from which the foresters of the division can next winter draw conclusions and results. To a young man of an observing and inquisitive turn of mind the work affords an excellent opportunity for learning the nature of the problems with which a forester has to deal, and the ways in which he does part of his work.

To EXAMINE OUR FORESTS.—George B. Sudworth, the Dendrologist of the Division of Forestry of the Department of Agriculture, recently left Washington to examine as much of the Sierra

## A Few Words

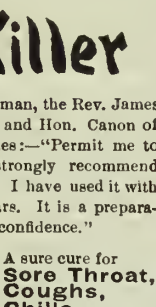
about

# Pain-Killer

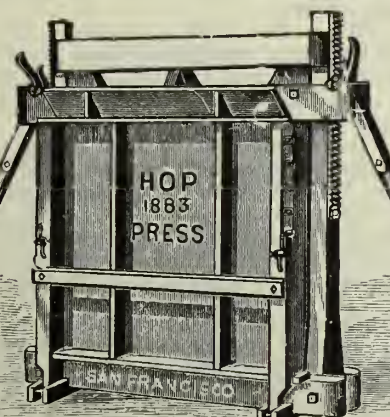
A prominent Montreal clergyman, the Rev. James H. Dixon, Rector St. Judes and Hon. Canon of Christ Church Cathedral, writes:—"Permit me to send you a few lines to strongly recommend PERRY DAVIS' PAIN-KILLER. I have used it with satisfaction for thirty-five years. It is a preparation which deserves full public confidence."

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## Patrons of Husbandry.

From the Worthy Master.

TO THE EDITOR:—The following are thoughts from the leading Grange writers relative to dormant Granges:

The work that the order should do cannot be carried on by a few. If all will work we can double our membership and treble our usefulness.

Our first duty is to our subordinate Grange. The social part should never be neglected. Attend constantly the stated meetings of the Grange.

Be careful to elect for officers those brothers and sisters who are peculiarly fitted for the positions to which they are elected.

Let each member do all in his power to make the meetings of the Grange entertaining and profitable by discussions, essays, readings and lectures.

Cultivate social relations and friendships among the members of the Grange, around the home and fireside, and let the music and sentiment of Grange songs enliven such occasions. Support Grange papers and have a goodly supply of Grange literature.

Let every member of our order consider himself a missionary, and by constant endeavor create a public sentiment in regard to our order which will add to its numbers, and co-operate in buying and selling. An idle Grange is on the highway to destruction.

Visits and wise counsel from State and national officers are good, and should be within easy access of every struggling subordinate Grange. But self-help should be the chief reliance, and should be brought to bear in a practical way, for where a Grange depends entirely on outside assistance to keep the interest alive it lacks backbone, and is, therefore, a hopeless cripple.

When one accepts an office in a Grange and pledges fidelity to the cause, he should either do the work to the best of his ability or resign and allow some one to fill the place who will live up to the obligation taken; for when a Grange lacks leadership it has little chance to prosper; but with officers promptly at their posts, and equally prompt to give all lines of the Grange work due attention, there will be no lack of attendance, interest and growth.

Let the above be read in each subordinate Grange at every meeting till the next session of the State Grange, and afterwards as often as needed.

G. W. WORTHEN, W. M.,  
California State Grange.

### State Grange Meeting.

The twenty-eighth annual session of the California State Grange will convene in Los Gatos Tuesday, October 2, at 11 o'clock A. M. The regular session will be held in Masonic Hall, near headquarters. Arrangements will be made for the usual reduced railroad rates, namely, of fare and a third. The usual railroad certificates will be furnished to the Secretary of each Grange. The Secretary of each subordinate Grange will send, under the seal of the Grange, the names of delegates and alternates to Secretary Miss Laurola S. Woodhams as soon as they are elected; also, send the estimated number of Patrons who will probably attend the meeting of the State Grange.

The representatives of each subordinate Grange are required to present and read their reports on the first or second day of the session, as they may be called for. Any new business they may desire to introduce should be submitted early in the session, in order that the matter may be referred to the different committees and avoid delay.

FEAST OF POMONA.—Fifth and sixth degree blanks will be sent each Grange upon application to the Secretary of the State Grange. The conferring of the fifth and sixth degrees and the Feast of Pomona, according to the custom in California, are made distinctive and important features of the State Grange session. As they are decidedly a State Grange function, it is thought best for

the State Grange to govern them in their entirety.

As has been done for the past two years, the Feast of Pomona will be a State and not a local affair, thus affording each person an opportunity of sending such specimens from their farms as they may desire to exhibit at the State Grange meeting. To carry out this idea and make it successful, the Feast of Pomona and exhibition of products will be given due prominence, and contributions from all parts of the State are solicited, said contributions to be sent to W. D. Houx, Los Gatos, to arrive not later than Thursday forenoon, when they will be received and placed upon tables, with the card of the grower and the name of the variety attached.

Reduced hotel and boarding house rates have been secured.

Make applications for accommodations to any member of the Reception Committee whose names appear below. The Reception Committee will be on duty Monday evening and Tuesday at the railroad station to direct visitors to hotels and lodging houses and the place of meeting.

Reception Committee—Mr. J. J. Cornell, Campbell; Dr. James Limon, Los Gatos; Mr. George Walker, Los Gatos; Mrs. J. J. Cornell, Campbell; Mrs. W. A. Riggs, Campbell.

Everything possible will be done to make the twenty-eighth session a grand success, and it is hoped that every Grange in the State will be represented.

G. W. WORTHEN,

Master Cal. State Grange.

LAUROLA S. WOODHAMS,  
Secretary Cal. State Grange.

## FRUIT PRESERVATION.

### Cold Process Method.

We have had inquiries about a cold process for putting up fruit, which has been widely advertised as a secret to be sold for \$1. We have never had any faith in it; but if any one desires to try it, perhaps the following will do. It is furnished by a Nebraska lady to the Practical Farmer:

Place your jar or jars (glass or stone) filled with fruit or vegetables (not cooked) in a large, tight box. A grocery box will do. Place in the box jars containing half as many gallons of water as you have of fruit. Put in a separate vessel half teaspoonful of white chalk, half teaspoonful salt, half teaspoonful sugar, one teaspoonful charcoal and as many ounces of sulphur as you have gallons of fruit. Place this in the box with the jars containing the fruit and water; set fire to the chemicals and cover the box very closely. After the chemicals are all burned, empty the water over the fruit and the cloths over the jars and set in a cool place. In preserving tomatoes, use no water, but scald them enough to peel. Hang a piece of thin muslin across the top of box, bagged enough to hold tomatoes; set the jar in the box under the muslin so as to catch the juice. Pour the prepared tomatoes into the muslin. Use the same process as above (except water). When the chemicals are all burned, pour the tomatoes into the jar containing the juice. Corn should be cooked before cutting from cob and put through same process. This, says the writer, is the best recipe, for it saves time, sugar and standing over a hot fire, and then your fruit is always fresh and will keep any length of time.

NEARLY everyone has decided on his method of curing prunes, and yet there is quite a diversity in the amount of lye used. The fact seems to be that a weak solution kept very hot will do the work, while a strong solution will act more quickly. By a weak solution we understand that more than twenty gallons of water is used to the pound of lye 100% pure, and that one pound to ten gallons is considered a strong solution. The solution should be changed frequently, as it becomes heavily charged with the soluble matter from the prunes, and when this is done rinsing is considered a superfluity. The lye solution leaves the fruit thoroughly

disinfected, but by using a rinsing bath there is a liability of infecting the fruit again with a dirty dip, and it is not as likely to keep well as when spread directly from the lye. The amount of lye remaining on the fruit is so small as not to be detected.—Tree and Vine.

## THE VETERINARIAN.

Answers by Dr. Creely.

FOR A BALD SCAR.

TO THE EDITOR:—As a subscriber would you please inform me through your 'Veterinary' column what is the best thing to make the hair grow over a newly healed wound or cut, and, also, if the hair can be prevented from growing out white?—R. H. SKIMMINGS, San Francisco.

Take oil cedar,  $\frac{1}{2}$  ounce; tinct. iodine, 2 ounces; iodide potash, 1 ounce; alcohol, 8 ounces. Mix and apply once daily.

E. J. CREELY, D. V. S.  
510 Golden Gate Ave., S. F.

### CATTLE FOR EXHIBITION.

How They are Prepared so as to Look Their Best.

At the great show and auction sale held at Kansas City last year, upwards of five hundred head of cattle from the finest herds in the world were entered for exhibition and for sale. A visitor gives the following account of the careful methods used in preparing the cattle for the show ring:

"After their trip on the cars, many having come hundreds of miles, they are more or less soiled by the accumulation of dust and dirt on the skin. The stockyard stables are provided with large wash-rooms, well supplied with brushes, scrubbers, scrapers, rubbers, cloths and soap, though many of the more prominent breeders will use nothing but their own brushes, etc. The animals are first well curried, then all the loose dust and hair are brushed out with a fine bristle brush. They are then copiously lathered from head to foot with warm water and soap. When carefully scrubbed, they are rinsed with clean water, scraped and rubbed dry with linen cloths.

"The horns are polished by first scraping the rough, loose horn with glass; they are then sand-papered and rubbed with emery powder until they glisten like burnished brass, after which they are protected by flannel-lined leather covers made expressly for each individual. When the polished horns need cleaning, it is done with Ivory Soap on a damp cloth; then they are again polished with a strip of almost dry flannel on which Ivory Soap has been rubbed.

"When the toilet is complete, they are blanketed with flannel-lined, 'made-to-order' canvas blankets and placed in roomy box stalls, knee deep in clean straw.

"In conversation with a groom, I learned that, almost without exception, Ivory Soap is the only soap used for the purpose, and that no other soap leaves the skin in that cool-looking, baby-pink condition or gives that much-desired pearly, silky luster to the hair."

JOHNSON GRASS PEST.—Phoenix, Aug. 13: Johnson grass, a pest introduced into the Verde valley several years ago, has spread rapidly and is now causing serious trouble by mixture with alfalfa. It is valueless as feed and makes the hay with which it mixes worthless. Ranchers are alarmed at its spread and will hold meetings to devise means for its extermination. The authorities at the Government Experimental Station will also take the matter up.

### Deafness Cannot Be Cured

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian tube. When this tube is inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed, Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that can not be cured by Hall's Catarrh Cure. Send for circulars, free.

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This property will be ready for sale and rent after July 15th, 1900. The closest personal inspection of the land by proposed purchasers and tenants is invited.

For further particulars, address

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Agent of the Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.

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## List of U. S. Patents for Pacific Coast Inventors.

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FOR PACIFIC COAST.

FOR THE WEEK ENDING AUGUST 7, 1900.

- 655,539.—PICK POINT—J. Aegerter, S. F.  
655,430.—REFINING ASPHALT—A. F. L. Bell, Carpinteria, Cal.  
655,598.—SPRING SEAT—W. Bochart, Carson, Nev.  
655,676.—CONVEYOR—J. A. Brown, Portland, Or.  
655,196.—SERVING APPARATUS—W. C. Church, Portland, Or.  
655,200.—COW MILKER—W. A. Condron, Marshfield, Or.  
655,206.—TRUSS PAD—A. J. Davidson, Douglas City, Cal.  
655,330.—HOP KILN—J. & A. B. C. Dowdell, St. Helena, Cal.  
655,615.—HYDRAULIC ELEVATOR—G. H. Evans, Oroville, Cal.  
655,334.—GRAIN DRILL—W. Falconer, Selma, Cal.  
655,651.—MULTIPLEX TELEPHONY—E. A. Faller, S. F.  
655,335.—MOTOR STARTER—E. M. Fraser, S. F.  
655,336.—CONTROLLER—E. M. Fraser, S. F.  
655,218.—EXCAVATOR—D. W. R. French, Westport, Wash.  
655,345.—BOTTLE FAUCET—H. A. Knight, Alameda, Cal.  
655,630.—DRAG SAW GUIDE—E. F. Lafayette, Sedro, Wash.  
655,347.—AXLE LUBRICATOR—J. E. Ludwig, S. F.  
655,502.—PICTURE FRAME—A. F. Messenger, Phoenix, Ariz.  
655,374.—GATE—J. N. Salmon, Lathrop, Cal.  
655,458.—MAKING SUPERPHOSPHATES—H. Saxl, S. F.  
655,375.—ORCHARD PLOW—T. Scanlon, Fresno, Cal.  
655,418.—FURNACE—R. Schorr, S. F.  
655,464.—FUEL FEEDER—F. N. Spear, Los Angeles, Cal.  
655,382.—WINDOW LOCK—W. H. Talbot, S. F.  
655,531.—FASTENING CORDS—O. Wallman, Spokane, Wash.  
655,470.—CONCENTRATOR—W. H. Washburn, Oroville, Or.  
33,046.—DESIGN—Lydia A. Craven, Spokane, Wash.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey, Strong & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

**BOTTLE FAUCET ATTACHMENT.**—No. 655,345. Aug. 7, 1900. H. A. Knight, Alameda, Cal. The object of this invention is to provide for the more perfect charging of carbonic acid gas and the like into bottles containing liquids, whereby the latter are made effervescent, and a means for withdrawing the contents of the bottle in small quantities as needed without injuriously reducing the quantity or pressure of gas in the remaining liquid, the whole designed to operate without the removal of the stopper and connected parts. It consists of a tubular screw-threaded stopper fitting corresponding threads in the neck of the bottle, having a flange and washer to form a joint, and a tubular extension above and below the stopper. A cap is provided with a stopper to fit this extension having a central and packed valve stem, and a valve at its lower end closable upon a seat within the stopper. The cap also forms an exterior screw-threaded sleeve fitting upon the outside of the stopper extension, and an inwardly open spring-pressed valve is provided for charging the bottle, this valve having a stem extending through the stopper, and the cap upon the upper end with admission channels formed through it.

**HOP BLEACHING AND DRYING KILN.**—No. 655,330. Aug. 7, 1900. J. & A. B. C. Dowdell, St. Helena, Cal. This invention is designed to bleach and dry hops. It consists of a room or compartment having a foraminous floor adapted to support the hops to be dried, and in conjunction with this of a covering which may be drawn over the surface of the hops to confine and prevent the heat and moisture from escaping therefrom during the process of bleaching. The sulphur fumes are produced in any suitable manner and delivered from below so as to rise into the hops, and are there retained by the superposed covering until the bleaching is perfected. The covering is then withdrawn, and heat being applied the drying will be completed in the usual manner. In this manner the

hops are very perfectly bleached with a minimum expenditure of time and material.

**GRAIN DRILL ATTACHMENTS.**—No. 655,334. Aug. 7, 1900. Wm. Falconer, Selma, Cal. This invention relates to an attachment for grain drills of that class in which the grain is delivered from a reservoir or feed box through tubes and shoes at the lower ends, these shoes forming drills to receive the grain, and the object is to provide a supplemental attachment by which the pressure upon the heel of the shoe can be regulated so as to insure the drill being made of sufficient depth in hard or lumpy ground, and to prevent it from going too deep where the ground is soft and sandy. The front ends of the shoes have elastic connections and supports; standards are flexibly connected with each shoe at the point in the rear of the forward connections and extending upwardly from their point of attachment. A fixed bar having holes through which the standards are slidable acts to limit the movement of the standards by reason of pins or stops which are adjustably fixed to the standards to contact with the bar. Spiral springs surround the standards, the ends pressing respectively against the bar and against the adjustable stops so that pressure is exerted to force the heels of the shoes into the ground, while other pins or stops fixed to the standard above the bar limit the depth to which the shoes are forced in the ground when the latter is soft.

**AXLE LUBRICATOR.**—No. 655,347. Aug. 7, 1900. J. E. Ludwig, San Francisco, Cal. This device is designed for the lubrication of vehicle axles without the removing of the wheels, and is particularly adapted for heavily loaded vehicles, such as large wagons loaded with freight which is to be carried for a number of days before reaching its destination. It consists of a lubricant reservoir, with means for connecting it with the outer end of the axle to be lubricated, and means for forming a tight joint therewith. With this is a device by which the lubricant may be forced into the space between the axle and axle-box, this device being in the form of a plunger or piston movable in the lubricant-containing cylinder, so that when the piston is forced inwardly, the lubricant will be passed through the connecting passage and into the space between the axle-box and the axle in sufficient quantities for the purpose.

**METHOD OF MAKING SUPERPHOSPHATES.**—No. 655,458. Aug. 7, 1900. Heinrich Saxl, San Francisco, Cal., one-half assigned to A. A. Adler, of same place. This invention is designed to provide a concentrated easily soluble phosphoric acid, and to produce superphosphates rich in fertilizing material. It consists in first producing normal superphosphates by subjecting the phosphate of lime containing the material to the action of sulphuric acid, then mixing the mass with water, separating out the liquid and evaporating it, then mixing with the product the second body of phosphate-containing material, withdrawing the resultant mass and separating the liquid therefrom.



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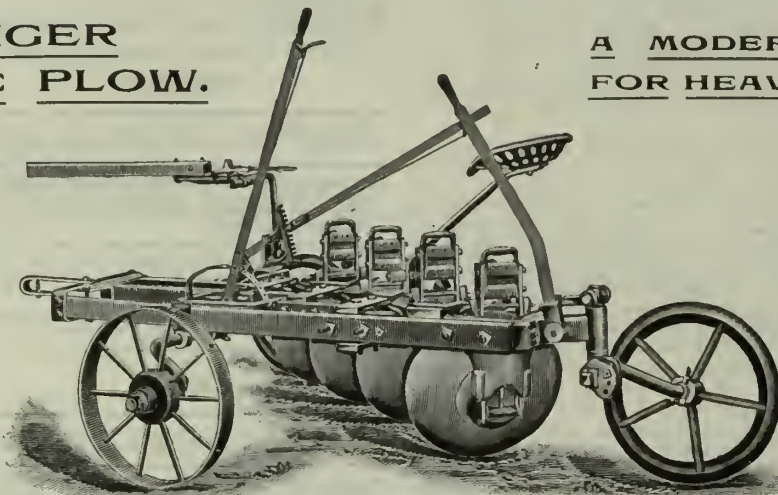
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 9.

SAN FRANCISCO, SATURDAY, SEPTEMBER 1, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

### September in the Coast Region.

The season turns in September. The westerly winds which bring to the coast region much fog and chill during July and August relax their forceful habit and become but grateful, cooling air currents in September. The temperature rises, the sunshine is clearer as the air becomes less humid. The days do not yet disclose the sad autumnal shortening. In the coast region September is one of the most delightful open-air months of the year.

Were it not that the division of the school and college year brings the closed season in June and July, September would be a very popular vacation month. For outdoor enjoyments it would be better thus. The cessation of the driving winds and fogs makes the ocean beach a more salubrious resort throughout the whole length of the State, but more conspicuously so in the central and northern regions of the coast. The bays become safer and smoother for boating and bathing, and the coast woods and mountains are also more inviting to the stroller and the hunter. There still remains enough coolness in the air to give residents of the interior valley the bracing, stimulating climate which they desire, and it is not strange that after the heat and hurry of the harvest so many come from the hot valleys to the west side of the Coast Range for their rest and recuperation after arduous labors.

Though September usually brings but little rain and never, thus far, enough to interfere with open air life and recreation, there come cloud pictures which the midsummer in this part of the State does not afford. Nature's preparations for the rainy season are clearly in progress. The marshalling of clouds of threatening aspect begins and the beams of the rising and the setting sun work strange color

effects upon them. Never have we seen sunsets better entitled to the term of gorgeous than in September. The clouds often remind us of newly recruited battalions: the uniforms are bright and new, their flags unstained by battle smoke, their guns innocent of roar and rattle. They are marshalled in what seem to be most effective lines of battle, but they gather and separate without warfare. As the months advance this dress parade of the clouds gives place to effective conflict, and with more somber colors and more resolute manœuvre they enter vigorously upon the storm work of the rainy season.

On the larger streams of the coast region September finds the waters much reduced in volume, it is true, and yet there is often quite enough for beauty and frolic. The stream banks do not show the flowers of spring, but they often have much late bloom, and the colors of autumn in foliage are just appearing. The whole scene is quiet, restful, and the air full of delights to the senses. The pictures on this page are typical of the first month of autumn in the San Francisco bay region. They are taken on streams which contribute to the water supply of the metropolis through the wide reaching system of the Spring Valley Water Company, of which we wrote at length in the PACIFIC RURAL PRESS of July 21st. These streams of pure water, after serving

their purposes in the beautifying of the regions which they traverse, pour their waters, not into the ocean which has no need for them, but into reservoirs, from which they are drawn as needed for the comfort of the people and the promotion of the metropolitan industries.

CALIFORNIA CANNED ASPARAGUS is certainly one of our most important recent accomplishments, and the possibility of the extension of the output is wide. A telegram from New York on Tuesday reported the arrival of seventeen earloads of canned California asparagus, the ears containing about 500 cases each. This is the heaviest single shipment that has been sent since the process of canning the large extra yield of California began. The New York dispatches say that consumers there regard asparagus as the choicest of vegetable products, and the regular season at the East for fresh cut has for many years been deplored as being too short. The success of canning asparagus so that it retains its excellence is, consequently, an agreeable achievement. The managers of the consignment feel confident that still larger invoices will be likely to follow if this venture meets the success they look for. This canned asparagus certainly should win. It is a practical illustration of the advantage of canning while the material is in its best possible condition. The fields are on the reclaimed islands of the Sacramento and San Joaquin,



Scene in Sunol Glen in Alameda County.



Below Pilarcitos Lake, in San Mateo County.

and the canneries are there also. There is no appreciable time between the cutting and the canning—no chance whatever for wilting or deterioration. The canning succeeds in holding this condition wonderfully. It has been said by experts that canned asparagus is better than the fresh vegetable which undergoes transportation to the markets of San Francisco. It is nearer the real thing.

It seems that the quarantine against Smyrna figs may not last as long as seemed likely last week. It is announced from Washington that the plague quarantine will be raised sixty days after the Government there officially announces Smyrna free from bubonic plague. An order issued by the Treasury Department last week instructs quarantine officers at all points that the regulations against the shipment of Smyrna figs and raisins should be waived after Smyrna officially has been declared free for sixty days.

A SERIOUS LOSS was occasioned by a fire which last Saturday afternoon burned the experiment station building at the Nevada State University at Reno. It was a two-story structure, with basement. The contents were partially saved. The direct loss is pretty well covered by insurance, but the indirect loss in destruction of materials and interruption of the work of the station will be large. The Nevada station can be assured of the sympathy of the California station workers, who underwent a similar loss two years ago.

THE directors of the California Raisin Growers' Association have elected Louis F. Monteagle of San Francisco a fifth member of the board, to succeed President M. Theodore Kearney, whose resignation has been accepted by the growers. The new director has extensive vineyard and orchard interests in Kings and Tulare counties.



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E. J. WICKSON.....Horticultural Editor.

San Francisco, September 1, 1900.

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## The Week.

Red Bluff dispatches on Tuesday spoke of showers and thunders and lightnings and cool breezes and prospects for more rain. It is comforting that the Weather Bureau dismisses the whole matter as a trace, and we hope that is all there will be of it for some time. There is too much fruit and grain still out to make the thought of rain comfortable. September is not much of a month for rain anyway. The average for the month at San Francisco is considerably less than one-third of an inch, and the heaviest September rainfall for the last thirty years was 1.06 inches. No one is likely, therefore, to get drowned in September rain. Still, it is well to prepare for it so far as possible.

Fruits are in such demand for canning that the Eastern shipments are falling a little behind. Some peach growers have also done better by drying than they could for overland shipment. Still, the figures are respectable. The total for the present season to Aug. 25 is 4308 cars, which is 123 cars less than the total for the corresponding date last season. This deficiency may, however, be more than made up before the season closes.

Wheat is bracing up as we go to press (on Wednesday), after several days of dullness and doubt, and the quotation for futures is now a little better than it was a week ago. There is very little doing in spot wheat; only a small fraction of one mixed cargo can be credited to wheat exporters. The shippers are, however, still buying shipping barley, and prices for grades which suit them are firm. Feed barley is weak. Oats are firmly held, but quiet, as Government orders are not yet in sight. Corn is strong and supplies small. Rye is unchanged. Mustard seed is stiff, though only local sales are now being made. Holders are advancing rates. Feedstuffs are unchanged, except rolled barley, which is still shading down. Mutton has a wider range, as some old sheep do not reach former prices. Hogs are unchanged, though supplies are better, owing to receipt of six cars from Nebraska. Butter is slow and weak for all but the fanciest brands. Stored butter sells too well and hurts all but the finest fresh. Cheese is steady and in fair demand. The supply is ample, but there is now overstock of the mild new cheese which California buyers like so well. Eggs are firm for strictly select; other kinds are plentiful, both from the East and from storage. Poultry is rather slow, but unchanged, except that the amounts of poor stock arriving freely hurt themselves. A few new Lady Washington beans are in. Small whites are

scarcest and highest, through buying for the wars, and the new crop is still out of sight for a time. Common potatoes are weak and are being sold low for shipping. Onions are fairly steady. Canning fruits, especially peaches and pears, are being taken at full prices when of the acceptable grade. Limes are stiffer, and this may help the lemon trade. Large quantities are expected to be used during the great celebration of September 10, if the weather keeps warm. The dried fruit market is in good shape, but less is doing. Raisins are cleaned up by a sale to a seedling firm. Prune prices are expected at the close of this week, as stated elsewhere. Wool is slow and waiting for the election, probably. Hops are firm and in good tone. Honey is doing well and 400 cases, with 5000 pounds of wax, went to Liverpool this week. It is the first heavy shipment of the season.

DESTRUCTIVE forest fires continue in the grand mountains above the San Gabriel valley, in Los Angeles county, and while all available force is employed in fighting the flames there is a growing determination among the people that something more systematic and effective in the way of protection than has yet been secured must be sought for. The newspapers are urging the matter upon the attention of those who may become members of the next Legislature in order that something better may be done. With reference both to forest protection from fire and from trespassers, and to make the forests self-supporting, we have heard of nothing so promising as the plan urged by Gifford Pinchot of the Agricultural Department. This looks to the withdrawal of timber lands from entry until a scientific scheme of forestry shall be inaugurated. Then timber cutting would be permitted under regulations which enforce economical rather than wasteful methods and favor reproduction rather than utter destruction. The forest would be patrolled by a trained civilian guard enjoying a secure tenure of office, so that politics would not affect them. Under this plan the forests would be preserved and perpetuated, yet we should suffer no embarrassment as to lumber supplies. When the organized public sentiment of California demands such a system Congress will provide for it, and a clear demonstration by the coming Legislature of the State would provide the measure. The Forest and Water Association is working toward this end and it is a good work.

WE are apparently to have a chance to stamp on the pests which may arrive at this port in the mails from the Philippines. In our issue of August 11 the action of the State Board of Horticulture, asking the privilege of examining such material, was noted. It is now telegraphed from Washington that in response to a letter of inquiry from the Postmaster-General, Secretary of Agriculture Wilson has approved the request of the California State Board of Horticulture that postmasters at Pacific coast points of entry shall submit all mail matter from Hawaii and the Philippines containing fruit or plants to the horticultural officials of the Pacific Coast States for their inspection before delivery to the addressees. Secretary Wilson in his reply says that the quarantine service which California has been carrying on for some years to protect the State from injurious insects, especially from Asiatic and Australasian ports, had done admirable work and has saved the horticultural industries on the coast from great loss. If the instructions to postmasters suggested can be issued, he says, the protection of the fruit-growing interests of that part of the country will be complete. This is very good in securing the protection needed. It is also important in showing that California quarantine work receives the approval of the highest agricultural authorities at the national capital.

THE great rush is now on in the prune orchards, and the lack of adequate labor supply is apparent. The Mercury says that in the Santa Clara orchards the drop so far has been slow, owing to the cool weather, and this has been a fortunate thing for the growers in some respects, as they have found it almost impossible to obtain sufficient help to gather the fruit. Now that the main drop is at hand, it is hard to tell what they will do. Although prices for picking have advanced, the response is not adequate to supply the exceptional demand for laborers, and it

looks as though much of the fruit would go to waste. Thousands of men, women and children are busily engaged in gathering up prunes, but there is work now, and will be for a few weeks to come, for probably as many more. It would be a good chance to turn leisure time to advantage and at the same time learn something of the great prune interest of the San Jose region.

SAN FRANCISCO has to be patient under the determination of the census just completed. Official returns from the twelfth census place the present population of San Francisco at 342,782. It is interesting that for the first time in the history of the municipality San Francisco has lost rank. By the returns for 1880 the city passed New Orleans and advanced from tenth to ninth place. In 1890 San Francisco wrested the eighth place from Cincinnati. The absorption of Brooklyn by Greater New York would have made us seventh but for the more rapid growth of Cleveland and Buffalo, both of which have passed San Francisco in population. Cleveland takes seventh place, Buffalo eighth, and San Francisco drops back to the rank held in 1880, and is now ninth among American municipalities.

PRUNES are arriving at the warehouses in increasing quantities. President Bond of the California Cured Fruit Association states that by Saturday of this week the directors will be enabled to estimate approximately what the grades and quality will be, and so will feel justified in making the opening prices for the season at that time. The Santa Clara growers seem to think that the directors have acted sagaciously in deferring this important action, and that far better results will be had for the growers than if the fixing of prices had been premature. Nevertheless, there has been more or less suspense, which will be relieved by the directors' announcement of the figures they have settled upon for opening sales.

It is reported that the New York importers are doing their utmost to have the plague restriction removed from Smyrna exports at once instead of waiting the time specified in a paragraph on the first page of this issue. California fig growers should exert their influence to have the ruling maintained. It seems but a fair restriction, and certainly the selfish motives of importers should be discerned in the effort to break it down. California Senators and Congressmen are now at home and can be easily reached by their constituents and appealed to to offset the New York effort.

IN certain lines the United States has to yield to Germany at the Paris Exposition. Germany has secured 260 grand prizes, the United States 218 and Great Britain 179. Of the total number of classes comprised in the Exposition Germany triumphs over all others in fifty-one, the United States wins in thirty-one and Great Britain in thirty. These figures represent fairly and impartially the relative order of merit of the three great competing nations. One of the departments in which Germany shows incontestable superiority is higher agricultural education.

GENEROUS rains are dispelling the gloom of the famine in India. The Viceroy of India, Lord Curzon of Kedleston, telegraphs that good rain continues to fall, but that cholera still prevails in many districts of that country. It will be some time, of course, before the afflicted natives can secure any food from the refreshed soil; but no doubt the generous contributions now being sent in from all parts of the civilized world will alleviate suffering and enable the people to begin again in their most unfortunate country.

IT will be comforting to many who propose to attend the State Fair to know that the most offensive and dangerous forms of gambling will be suppressed. The Chief of Police declares he will stop everything, including the poolrooms, and the only gambling will be bookmaking and poolselling at the racetrack, which is permitted by ordinance.

MR. LEONARD COATES writes us that the Napa Fruit Company had its ear of prunes loaded on Saturday, Aug. 25th, packed in 25-pound boxes. The car is for a Texas order, but can not go forward until so ordered by the Cured Fruit Association. Mr. Coates believes they have the first car of the season.



# QUERIES AND REPLIES.

## Which Apricot to Plant.

TO THE EDITOR:—I wish to have a description of the Sparks Mammoth apricot and the Bregetto apricot, and which would you advise planting at Orosi, in Tulare county. They have there what they think is Sparks and they say it is a better bearer than the Moorpark and better for drying, because it ripens more evenly and will hang on the tree longer than either the Moorpark or the Royal. On the other hand the Bregetto is commended to me as being better than any of those named. Which do you think is better for planting at Orosi?—READER, San Joaquin county.

Sparks Mammoth is a large, rather flat apricot, pale yellow, very tender, juicy and sweet. It ought to make very fine dried fruit. Its bearing habit is not completely demonstrated. It is reported very shy in some parts of the State, especially at the south. If it bears well in your region you can hardly get a better variety for drying.

The Bergetti, or "Bregetto," so our correspondent has it, is a variety of uncertain origin. It is large, irregular, in being heavy at the stem ends, dark yellow and very closely resembles the St. Ambroise in shape and in growth of the tree as well, but whether it behaves as badly as the St. Ambroise in lack of color around the pit cavity when dried we do not know. It has been very strongly commended in San Joaquin county.

It is very unsafe to prescribe varieties of the apricot for one locality on the basis of their success in another locality. The variety favorably reported from Orosi is, in all probability, Sparks Mammoth, and we should give that the preference on the basis of its local success and of its superior form, color and flavor—wherever it is found to bear regularly.

## Gas Process in Greenhouses.

TO THE EDITOR:—Can the fumigation process with cyanide of potassium and sulphuric acid be used to destroy insect life in a hothouse, and what would be the quantity of cyanide and sulphuric acid to be used for 100 cubic feet of space? Could it also be applied in a vineyard when grapes are ripening?—SUBURBAN, San Mateo.

The use of hydrocyanic acid gas for fumigation of hothouses, etc., has been demonstrated to be practicable within certain limits. The great variety of plants treated and their different degrees of toleration of this gas makes it a somewhat complex problem to determine what strength should be used and what length of exposure should be given. Very interesting work in determining these questions has been done by the United States Department of Agriculture at Washington, and if you will apply to Dr. L. O. Howard, entomologist, for circular No. 37, second series, on the "Use of Hydrocyanic Acid Gas for Fumigating Greenhouses and Cold Frames," you will find that it contains records of a number of interesting experiments, and prescribes, so far as possible, amounts of material to be used for different plants. We are not aware of data concerning the use of this gas in connection with ripening grapes. You will have to determine that for yourself, using such amounts as befit tender plants, for grape foliage is usually quite susceptible to injury from insecticides.

## Paris Green and Codlin Moth.

TO THE EDITOR:—Is there any way of ascertaining the quality of Paris green without a chemist? I have about an acre of Bartlett pear trees, seven years old, which had a fine looking crop of fruit, but when gathered not more than 10% were marketable. The codlin moth had done its work thoroughly. I sprayed the fruit trees when blossoms were dropping and about once every twenty days after that. I used the formula of one pound Paris green to 200 gallons of water. Please inform me how to proceed next season.—WM. HUFF, Rocklin.

Some adulterations can be readily recognized by allowing a little of the Paris green to run down a piece of glass, holding the glass slanting, so that by knocking on the edge of it with a knife the powder will flow slowly downward. If the trail left on the glass is whitish it is an adulteration. This was quite freely described in the PACIFIC RURAL PRESS of March 10th last, with illustrations. This method is only a rough prospect and more accurate chemical determination is often necessary. This will be made, free, by the University Experiment Station at Berkeley, and you should submit sample to the University before you purchase next year's supply. If you had

good Paris green your treatment should have saved your pears this year. It may be better for pears to make it a little stronger next year—say one pound to 160 gallons of water.

## Rusty Stubble.

TO THE EDITOR:—In plowing under stubble that has rust on it, would rust be more likely to appear another year than if the stubble were burned?—GROWER, Stanislaus county.

The plowing under of rusty stubble would probably make it more likely that rust would appear upon the following year, because the stubble contains countless millions of germs of the disease. Burning the stubble would destroy most of these, but still there would be enough remaining to distribute themselves throughout the field if the conditions were favorable in the spring for the growth of rust. We could not, then, assure you that the burning of the stubble would prevent the occurrence of rust the following year, and yet it might have a tendency in that direction, because so many germs would be destroyed. In other parts of the world it has been demonstrated that in some cases, at least, the rust fungus passes an intermediate stage in another plant, from which it goes again to the wheat plant, and is, therefore, not dependent upon wintering in the stubble. We are not aware that its course in this State has been made out.

## Eucalyptus in Santa Cruz Mountains.

TO THE EDITOR:—Will it do to plant eucalyptus trees in the Santa Cruz mountains on sandy hills between Glenwood and Felton? I wish the trees for fuel and for the sake of the landscape as well.—PEASUS FARM, Eccles.

As we had never seen any eucalyptus in that region we appealed for information to Mr. E. F. Adams of Wrights, an old resident and a close observer. He writes that he does not remember seeing a eucalyptus anywhere in the Santa Cruz hills and he can find no one else who has seen one. He can see no reason why they would not grow on the sandy hills between Glenwood and Felton if the ground is good enough. He would not expect frost enough to hurt them if kept out of the low gulches.

We would like to hear from other readers on the subject if they have experience to relate. If there should be any trouble with the blue gum because of low temperatures there are more hardy species which might succeed, as described in the PACIFIC RURAL PRESS of Feb. 18, 1899.

## Potato Worms.

TO THE EDITOR:—Have you any information which will enable a farmer to get rid of worms that eat potatoes? Has any remedy or any means of prevention been found?—READER, Long Beach, Los Angeles county.

The worm in the potatoes is the offspring of a small moth which usually attacks the tubers late in the summer, laying eggs at the base of the stem or on any tubers which may be partially exposed. Effective treatment seems to lie in digging and covering closely the potatoes as soon as ripe enough, or in throwing earth against the plants so as to deeply cover the tubers, if there must be delay in harvesting. Most harm usually results from leaving potatoes too long exposed in the field. We are not aware that insecticidal treatment has ever been applied.

## Hungarian Brome Grass.

TO THE EDITOR:—The writer has purchased a farm near this city. Can you tell me about Bromus inermis?—READER, Santa Ana.

Bromus inermis has been grown in California to a limited extent for fifteen years. It is a very good drouth-resisting grass, but it will not live through the summer on our arid lands. Where a little moisture is present it will hold life in the root and start quickly in the fall and make good winter growth. It should succeed in these respects around Santa Ana, but it would not be nearly so good as alfalfa on land suited for that plant. It would make better winter growth than alfalfa, but would not compare at all with it for summer growth.

## Questions Anticipated.

TO THE EDITOR:—Although I am much edified by your answers to questions, I wish to thank you for answering my questions before they are asked. Just as I had my mind all made up to ask some questions about building a silo there came the answer to all I

wanted to ask, and more, too. I took the hint and made an all-board silo, and have now two good structures and one now filled. Please accept thanks; it seemed that your article was for my benefit.—G. C. PACKARD, Santa Barbara.

This is very comforting and encouraging. We do not profess to be mind readers, but steady application for twenty-five years to study of California conditions and opportunities has probably given us some little insight into what our farmers want to know, or at least what they ought to know, and we proceed accordingly. We are glad when we know that we thus succeed in serving subscribers' interests.

# WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending August 27, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

## COAST AND BAY SECTIONS.

The weather has continued unusually cool in most places during the week, retarding fruit drying and the maturing of grapes to some extent, but improving the condition of potatoes and other crops. Prune picking and curing are in progress and in some sections the yield and quality are nearly equal to the average. Grapes are ripening and a good crop is expected. Pears are being shipped in considerable quantities from Lake county. Almond picking has commenced. Hops are doing well, but there will be a light crop. Grain harvest is completed and thrashing is nearly finished. In San Mateo county the yield of grain and hay is reported above average.

## SACRAMENTO VALLEY.

Continued cool weather has somewhat retarded the coloring and ripening of grapes in some places, and high winds have caused slight damage to pears and prunes, but in other respects conditions have been favorable for crops. In Yolo county a large crop of prunes is being gathered, but the fruit is mostly small. Prospects are good for a heavy crop of grapes, which are said to be of excellent quality. Muscatels will be ready for picking about Sept. 1. Sultanias and Muscatels give promise of an abundant yield. Deciduous fruits are reported below average in some localities. Hop picking is in progress, and shipments of new hops have been made from the American river district. Grain harvest is completed. Alfalfa hay is yielding a good crop. The seeding of summer-fallow lands will commence soon.

## SAN JOAQUIN VALLEY.

Clear weather, with moderate cool nights, has prevailed during the week. Fruit drying is progressing. Peaches and prunes are the principal fruits now being dried. The fruit crop is large in most sections. Grape picking has commenced in some localities and a few of the wineries have begun to crush. The cool nights have in a measure retarded the ripening of grapes. The second crop of figs is good. Olive trees are full and prospects are for a large crop. Citrus fruits are in good condition and a heavy crop is anticipated. Alfalfa continues to grow well in most sections. Stock are in good condition.

## SOUTHERN CALIFORNIA.

Warm days and cool, foggy nights have prevailed during the week. Pumping works are supplying a good flow of water. The grape crop is reported below average in quantity, and the quality inferior in some places; in the vicinity of San Diego, however, raisin grapes are said to be of superior size and flavor. Deciduous fruits are yielding a very poor crop. Oranges and lemons continue thrifty and give promise of a heavy crop. Bean harvest will begin soon; the yield will be light. Walnuts are below average in most places.

LOS ANGELES SUMMARY.—Extensive preparations are being made for raisin drying; San Diego reports the crop light, but of fine quality. The bean crop is light, particularly on unirrigated land. Hay baling continues in places.

EUREKA SUMMARY.—Sunshine and northerly winds are drying pastures and feed is becoming short. Small fruit is doing well; apples excellent and yield unusually large. No further damage by grub worm.

## Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Aug. 29, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Minimum Temperature for the Week.....	Maximum Temperature for the Week.....
Eureka.....	.06	.06	.42	.16	48	66
Red Bluff.....	T	.04	.02	.06	60	100
Sacramento.....	.00	T	.02	T	58	98
San Francisco.....	.00	T	T	.04	54	72
Fresno.....	.00	T	.00	T	56	100
Independence.....	.00	.07	.07	.08	58	92
San Luis Obispo.....	.00	T	.00	.06	50	76
Los Angeles.....	.00	T	.01	.06	52	84
San Diego.....	.00	T	.07	.06	62	76
Yuma.....	.00	.00	.00	.51	64	106



## THE DAIRY.

### The Dairy Industry.

From a paper read last week at the National Farmers' Congress by George M. Whitaker, Dairy Commissioner of Massachusetts, it is possible to draw some very pertinent and practical suggestions. It is important to do this now, because it was never so clear as now that dairying must be done well to be worth doing at all, and why this is so Mr. Whitaker clearly shows.

**THE DAIRYMAN A MANUFACTURER.**—The dairyman is a manufacturer, and the ordinary laws of business apply to him as well as to the manufacturer of cloth or jackknives. The essentials in manufacturing are three: First, the technical, the know-how; second, executive, the ability to produce at the lowest cost; third, commercial, the ability to sell, and at a profit.

As a result of the information given freely by State and national bulletins and at a nominal price by newspapers and books, the average American dairyman is an extremely intelligent man; yet, strange to say, thousands are deficient in available knowledge. Ignorance is not the only stumbling block in the way of the best quality of dairy products. Carelessness is its twin, and the bane of dairying.

The manufacturer must have executive ability to keep down the expense per unit of finished product, so that the goods can be sold at a profit. Too much idle or unprofitable capital is frequently found in dairying. The cost of making butter at different creameries varies 100%, according to the amount of business done. If the millions of dollars invested in farm and dairy machinery could be made to turn out a little more work without extra expense, the cost of production would be thereby decreased. Cost of production is greatly enhanced in many cases because cows are kept which produce much less than they should do. When some cows produce 455 pounds of butter per year and the average is only 150 to 175, there must be a wide range in the cost per month.

Commercial skill is not confined to Yankee shrewdness at a bargain, but comprehends ability in catering to and anticipating public wants, a knowledge of statistics and the world's markets, transportation problems, economic questions, legislation relating to fraudulent imitations.

**STATISTICS.**—The annual value of the dairy products of the nation is, in round figures, \$500,000,000. In the forty years previous to the census of 1890 population had increased 174%, but the number of milch cows had increased but 166%. In the East, the old dairy center, the increase in milch cows was but 50%, while in the north central division the increase was 700%. In the Dakotas the increase in thirty years was 1050%.

The production of butter has increased more rapidly than the increase in population.

The census of 1850 reported 13.51 pounds per capita; the census of 1890, 19.24 pounds. One-half of the butter production is in seven States. The largest dairy State is Iowa, making 10.4% of the country's production; next comes New York, with 9.3%, and Pennsylvania third, with 8%. This large increase of production shows the importance of a foreign outlet to prevent the surplus from unduly depressing the home market. Exports during the last ten years have fluctuated between 6,000,000 and 31,000,000 pounds. For the year ending June 20, 1899, the amount was 20,000,000 pounds.

**MILK.**—The production of milk for consumption is the second largest branch of the industry, using the produce of 5,500,000 cows. The production of sale milk has received less attention than its magnitude warrants. Being a perishable product and often marketed in small quantities, statistics have been hard to gather. In Boston, with a population of three-fourths of a million people, the large wholesalers brought into the city in the year 1899 95,000,000 quarts. Estimating the amount from other sources at 25,000,000 quarts, we have 120,000,000 quarts.

The farmers netted on an average at least 2½ cents per quart, which makes the business to them worth \$3,000,000. In New York, with twice the population of Boston, figures based upon the amount required to furnish the sale of milk, cream and condensed milk used in the city are placed at 584,000,000 quarts per year. At 2½ cents per quart, this amounts to \$14,600,000. When we consider the large number of cities and towns dependent upon the daily milkman, we can partially realize the importance of this business.

Condensed milk is a feature of dairying which has been increased rapidly during the last twenty years. None is mentioned in the census of 1870, but the census of 1890 reports 38,000,000 pounds. Exports of condensed milk are increasing rapidly, and in 1899 were \$1,000,000. The exports go largely to England, Hawaii, Cuba, Japan, China and Bermuda.

**CHEESE.**—Cheese is relatively of the least account in American dairying, calling for the production of 1,000,000 cows. While the production of butter increased one-third during the decade included between the census of 1880 and 1890, the production of

cheese declined one-third, from 27,000,000 to 18,000,000 pounds. Two States produced nearly three-quarters of the whole quantity of cheese manufactured in the country. New York leads with 40.3%, while Wisconsin is second with 21.3%.

The manufacture of cheese in factories has practically killed out farm dairy cheese. The exports of cheese have declined from 127,000,000 pounds in 1880 to 38,000,000 pounds in 1899. Of this latter amount, England, direct or through Canada, took 36,000,000 pounds.

**THE OUTLOOK.**—In conclusion, the dairy outlook seems to be bright, though not without some discouraging features. The high prices of the past have gone and there is danger of sharp competition from foreign markets, but the outlook seems very promising. With increasing intelligence and skill, the quality of dairy products will increase, and this will create a larger demand. Increasing prosperity and refinement will also swell the demand for the choicest dairy products and give ability and willingness to pay advanced prices for fancy cream, butter and cheese.

Greater intelligence will also make the consuming public better appreciate the food value and the relative cheapness of milk and cheese. The rate of increasing production of butter can not be maintained. The comparatively newer portions of our country, which at first were purely agricultural, are developing flourishing cities and towns, whose population will be consumers without producers. The central and western portions of the nation will hereafter show a smaller number of cows in proportion to population, and larger amounts of dairy products will be consumed at home.

I am told that already these places are making such demands upon the Chicago market that it is less dependent upon Boston and New York than it was a few years ago. This large increase in population will do much to relieve any congestion in the markets at the great centers. As regards cheese, it would seem that the bottom of the ladder had been reached, and that the business could not be much worse than it is.

This means that there must be an improvement. New inventions and increased co-operation will reduce cost of production, and, all things considered, I do not know of any form of manufacturing, unless it be something protected by patent, where the outlook is more favorable than is the manufacture of dairy products.

## SHEEP AND WOOL.

### Fat-Tailed Sheep in Central Asia and California.

Prof. N. E. Hansen of the South Dakota Experiment Station, recently visited Asia in the search for plants and animals desirable to introduce for experimental purposes in this country. At the last meeting of the sheep breeders of his State he read a paper upon the fat-tailed sheep of Central Asia. As California has perhaps the only flocks of this sheep in the United States, and has a climate admirably suited to their growth, the observations of Prof. Hansen are of wide interest to our readers.

**THE KIRGHIZ TARTAR SHEEP.**—In the Kirghiz Tartar steppes of northern Turkestan and southern Siberia, as well as at Taskent and Bokhara, I saw large numbers of true fat-tailed sheep. "Fat-rumped" would describe them better, as the very short tail is entirely hidden in the huge cushion of fat spread out like a bag or sofa cushion over the upper half of the hind legs. Viewed from behind this mass of fat trembles or "wobbles" when the animal moves and presents a very comical appearance. The fat tail of the Kirghiz sheep serves the purpose of carrying the animal through times of famine, and nearly disappears (the same as with the hump of the camel), reappearing when food becomes plentiful.

The fat tails of these Kirghiz sheep are regarded as a delicacy by the natives. This race is very hardy and endures storms and rough treatment to which an ordinary sheep would succumb. They are, by force of circumstances great rustlers on these dry steppes.

It is an interesting fact that the intestines are cleaned and cured in immense quantities for export to Europe where they are used for large sausage casings. It appears that the intestines are much stronger than those of ordinary sheep. A German at Taskent has been in this business many years and has made a fortune out of it. I visited one of his places where the intestines are prepared for export. A St. Louis butcher supply tried to get hold of this business for the American trade a few years ago, but found after about a year's trial that it was more profitable to secure the needed supply through the German firm which had had longer experience in dealing with these Mohammedan Asiatics.

Dr. Lansdell writes: "It is quite an error, Dr. Finsch says, to suppose that this peculiarity of race disappears by transplantation, for instance, to Russia, for it does so, only by cross breeding with ordinary sheep. The Kirghiz sheep are of large size, powerfully built, rather long legged, with a roundly bent nose and pendant ears. They attain a weight of from 150 to 180 pounds, of which the fat 'tail' alone

does not exceed forty pounds. The fleece is coarse, and the hairy wool alone is, therefore, less employed for spinning than for making felt. The horns of the wether are moderately developed, with a bend downwards and inwards, but sometimes they assume a spiral form. The ewes generally give birth to twin lambs in the spring, by which season the snow is off the ground."

**BOKHARA SHEEP.**—In the "Industries of Russia," a series of five volumes published by the Russian Government for the World's Fair at Chicago, Prof. P. N. Kouleshov of the Agricultural College at Moscow, discusses sheep raising in Russia (Vol. III, p. 215). The low prices for wool and unfavorable seasons have lessened the production of the fine wool or Merino sheep. The coarse wool sheep proved hardier and more resistant to diseases caused by cold and hunger, and hence have largely supplanted the former, especially in the southwestern provinces, or governments, as they are called. Prof. Kouleshov writes:

"The breeding of coarse-wool sheep is very profitable for the peasants, producing for them milk, cheese, butter, mutton and sheepskin, called smoushek."

The first Merino sheep were imported into Russia by the Emperor Peter the Great, in 1720, and have since been bred up into distinct Russian types, especially the Infatado and Mazaev. The latter is bred in some of the southern steppe provinces and especially in the steppes of the northern Caucasus, and is distinguished from other Russian and foreign breeds by their long, silky wool, and the great weight of their fleece.

The local breeds of coarse-wool sheep are numerous and varied, and according to the character of their product may be divided into the following classes:

Those bred for wool, for the skins, for milk and for meat.

Prof. Kouleshov continues:

"Among the breeds which furnish fine lambskins, called smoushka, the first place belongs to Karakul, breed of the Turkestan. The skins of new-born lambs of the Karakul type have a black, glossy wool, prettily curled, and which is very durable. These qualities render the Karakul skins very dear; they serve for adorning winter dresses, and the fur is known as Russian Astrachan. A good skin cost from 10 to 15 roubles (\$5.50 to \$7.25). The Karakul sheep is of average size, with small horns, drooping ears, a tail fat at the root, and with gray or black wool. During late years the Ministry of Imperial Domains and some farming societies had this breed of sheep brought from Turkestan for improving other breeds, and especially those of the Reshetilov type, which also give good lambskins. This latter variety and the Sokolsk are both bred in the government of Poltava, and give great quantities of milk, principally used for the making of cheese. But the sheep giving the greatest quantity of milk is the coarse-wool Bes-sarabian breed, known by the name of Choushik."

"The breeds which are the easiest fattened and which give the best mutton are the Caucasian, such as Tushinsk, Karachaevisk, Pshavsh and Grouzinsk. All the Caucasian sheep, and those resembling them in other localities of south Russia, have long, fat tails, spirally formed horns, and drooping, or half drooping ears; the wool is of different colors, and that of some breeds is silky, glossy and long."

"Among the sheep used for mutton the most celebrated is the fat-tailed breed of the Calmuck and Kirghiz steppes. It gives very good, fat mutton, and the animal is very hardy. The great quantity of fat which accumulates in the hind quarters during the summer serves as a source of blood supply for it during winter fastings. The strong, muscular legs, make this sheep capable of long journeys."

Prince V. I. Massalki, of the Imperial Department of Agriculture, at St. Petersburg, writes in the "Industries of Russia" (Vol. III, p. 467): "Sheep breeding appears to be the chief branch of the livestock industry of Turkestan, not only from the number of sheep bred, but also from the many uses to which the animal is put, for milk, meat, cheese, wool, skin, etc. Sheep breeding on a large scale is restricted exclusively to the nomadic population, the Kirghiz and Turcomans. The oases, in which a settled population predominates, seem to be the central points for the use of mutton and the employment of sheep wool and skin in the manufacture of numerous hand-made products, such as carpets of various kinds, felt, ropes, sacks, bags, tissue stuffs, skins, chamois, etc."

"Sheep of the Korduk breed are for the most part bred in central Asia. They are remarkable for their powers of endurance and also for the tastiness of their flesh, which, however, is somewhat fat, and for the huge excretion of fat that grows during the summer on their hind quarters, and which, during the winter failure of provender, serves the animal as a store of nutrition. Besides the Korduk breed in some parts of central Asia are found the Karakul sheep, which gives a beautiful and valuable lamb wool. Karakul, to the southwest of Bokhara, in the Khanate of Bokhara, is the principal place where they are bred. Sheep, like most domestic animals with the nomads, are kept the whole year in the open on green fodder, the consequence of which is that, notwithstanding they are strong and can support much,



they suffer keenly and perish in large numbers from want of provender during the cold, snowy winter months. Sheep breeding is the principal occupation of nearly the whole Turkestan population, in consequence of the impossibility, from lack of water, of increasing the quantity of plowed land; there is every ground for believing that it will, in the future, be largely developed.

"Goats are bred in small numbers both in the steppes and in the mountains. Their flesh serves as meat; they yield a valuable down; and from their skin, which is firm and durable, are made leathern water and koumiss flasks, etc."

**IMPORTANCE OF THE SHEEP.**—While studying the fruits and agricultural products of Bokhara I could not help noticing the very important part played by the Karakul black fat-tailed sheep in the agricultural economy of Bokhara. The old city of Bokhara is 12 versts (9 miles) from the new town of Bokhara, which is the station on the Russian military railway, extending from Krasnovodsk on the east shore of the Caspian sea to Samarcand (900 miles east), the very heart of central Asia. Between the old and new Bokhara is the town Babaudin, and here in October, 1897, on the way to old Bokhara, I visited the semi-weekly livestock market in company with the Austrian government veterinarian who was buying a carload of Karakul sheep for the Emperor of Austria. These sheep are of rather small size, fat-tailed, with tail extending below the lump of fat, mostly black. As they get older the wool becomes gray and white at the tips. This breed is largely raised around the city of Bokhara and at Karakul, the third station west. It is also found in Persia, but the people of Bokhara claim that theirs are better than those from Persia. Local tradition says that the breed came originally from Arabia at the time of the Moslem conquest. The breed, I was told, was found also in Afghanistan, but is larger in size. In that country the Emir of Afghanistan has a monopoly of the business.

**PERSIAN LAMB FUR.**—It is from the new-born Karakul lambs that the beautiful, glossy, black, curly pelt comes which is exported in great numbers to Europe and America. This fur is known as Persian lamb in America. The lambs are usually killed at not more than eight days after birth, because the wool rapidly loses its peculiar curliness and brilliant black color, which gives it its value. The pelt of the still-born lamb is also used and makes a beautiful trimming of peculiar velvety texture for collars, capes, etc. The finest of all comes from the fetus or unborn lambs. For this purpose the ewe is killed a week or so before the birth of the lamb. This makes the pelt very expensive, as two lives are sacrificed to get it, and is rarely done, popular belief to the contrary, notwithstanding.

I saw large quantities of these pelts at the great fair at Nishni Novgorod on the Volga river, where a great many different nationalities of Asia and Europe meet each year and exchange products to the extent of over \$120,000,000. I remember noticing on the way a pile of Karakul pelts that were sold after much haggling and violent gesticulations between a European trader and a dark-hued son of the Orient. These pelts go mostly to Liepsig and London, where the art of preparing furs has been carried to the greatest perfection, and from thence to all parts of the civilized world where such furs are in demand. In Europe the Karakul pelts are popularly known as Persian, the term Karakul being the trade name.

On his way to Bokhara, this Austrian government veterinarian had visited several sheep breeders in the Crimean peninsula and southern Russia, who made a specialty of breeding the Karakul, or Persian sheep. The tendency seems to be for this breed to deteriorate when brought from Turkestan to southern Russia, but excellent results are secured by crossing them with the sheep of southern Russia, imparting to the latter, to some extent, the fine curliness of the wool. I must now distinguish sharply between the coarsely curled Russian wool which in America is known as Astrachan fur, and the finely curled Bokhara lamb wool.

In Russia the Astrachan fur is very common and cheap. A large fur dealer at Moscow offered to make me a good overcoat to order from select Astrachan fur for 25 roubles (\$13.75), while Bokhara caps were worth 16 roubles (\$8.80) each. Both are black and curly, but in the genuine Karakul lamb fur of Bokhara the curl is very fine and close. Every Russian who can possibly afford it aspires to possess a genuine Karakul cap.

Upon landing in New York in March, 1898, I visited one of the leading fur stores and made inquiries regarding Persian lambskins. The dealer offered to duplicate the Persian lamb cap which I wore for from \$12 to \$15. Ladies' cloaks sold at upwards of \$100 each. The dealer said that while the fur was an expensive one, that if the sheep were raised in the United States the fur would become too cheap. Cloth manufacturers now make close imitations of Persian lambskin, and fashions change in furs.

Be this as it may, I am convinced that Persian lambs can be raised with profit in the warmer dry parts of the United States.

**CALIFORNIA EXPERIENCE.**—A few of these broad-tailed sheep were brought from Persia by the American Minister in 1891 and presented to the United

States Department of Agriculture. They were sent to California and have been bred there since by C. P. Bailey and the experiment stations of California. The full name of this breed is given as the Bayazit Broad-tailed sheep of Kurdistan, Persia.

J. H. Barber of California states that sheep of the same breed were received from Asia by George Washington and were used in founding and developing the celebrated Arlington Long Wools of Virginia. In California they have been crossed with various standard breeds with excellent results. It appears that the Persian wool is very long in staple but coarse in texture. In crosses with French Merinos the result was a long fiber wool, which sold at 2 cents per pound higher than pure Merino wool. The cross also greatly improves the mutton qualities of the Merino, and is a much hardier and a better rustler for food.

A California farmer says of these Persian-Merino crosses: "They are omnivorous feeders and great rustlers for food. If there is anything betwixt heaven and earth, they'll get it!"

When crossed with Shropshires very hardy sheep, especially adapted to mountain ranches, were obtained.

Let it not be supposed that California is the only State adapted to Persian sheep. In all probability the pure bloods will be best adapted to dry, hot regions, such as California, Arizona and New Mexico, but they should also be tried, especially for crossing, much further northward.

**SUMMARY.**—1. The breed or breeds of sheep in central Asia, which furnish the expensive fur known as Persian lamb, should be given a thorough trial in the United States.

2. The fat-tailed mutton sheep of the Kirghiz Tartar steppes of northern Turkestan and southern Siberia should be given a trial on the ranges of the northwest, where climatic conditions demand great hardiness. It appears reasonable that they will endure rough treatment better than sheep bred for centuries in the mild, moist climates of western Europe.

3. The whole subject of the native sheep, both wild and tame, of central Asia and Transcaucasia, should be thoroughly investigated by experts in sheep breeding, and provision made for experimental importations.

## THE STOCK YARD.

### Steer Feeding With Ensilage.

Prof. H. T. French of the Idaho Experiment Station publishes an account of experiments in cattle feeding, in which corn silage formed a leading part of the ration, and his results are interesting. Conditions and arrangements were rather unfavorable, and no doubt greater profit could be secured with better, so that this report becomes a safe basis for calculation, with the chances on the right side.

**KIND OF STOCK.**—The animals used in the feeding were two-year-old grade Shorthorns, with a little Hereford blood in one or two, and some Holstein, judging from the black and white markings. None of them were high grade. They were such animals as we were able to find on the farms and ranges, and would be considered an average lot of common-stock feeders.

The steers were delivered at the farm Dec. 1st and were permitted to run in the fields during that month. Some green corn was fed to them from the field where it had been shocked a few weeks before. All except one, which had lost his horns when a calf, was dehorned after reaching the farm.

The animals were fed three times daily: at 6 in the morning, and at 1 and at 5:30 o'clock in the afternoon.

**KINDS OF FOOD.**—The experimental feeding began Jan. 1st, and during this month the entire lot was fed the same kind of food, varying in amount to meet the needs of each animal. The animals were weighed in separate groups of four steers each.

The following average daily ration was fed during January: Thirty pounds of silage; ten pounds of grain, made up of four parts chopped wheat and six parts bran; and five pounds of chopped oat hay. The ration was divided into three feeds and weighed out to the animals at each feeding time. A portion of the time there were two or three pounds for each animal to weigh back each day as waste. On the whole, the animals ate up the feed very well. Even of the silage, which was new to them, there was not much waste.

This ration is a little richer in carbohydrates than the standard generally recommended, being about 1:7.5, while the German standard is 1:6.5. An effort was made throughout this feeding test to maintain this standard as nearly as possible with the food material at hand. The silage contained very little grain, for the corn was killed by frost before the ears were formed.

During February we determined to withhold the silage from four of the steers in Lot 1 and feed roots as a succulent food, thus comparing them with the silage fed the remaining eight.

The ration for the steers fed on roots instead of

silage consisted of the following: Twenty pounds of roots, mangel-wurzels; ten pounds of grain and twelve pounds of chopped oat and pea hay. The grain was made up of six pounds of chopped wheat, two pounds of bran and two pounds of old process oil meal. This ration is richer in protein than the January ration and gave better results, as shown by an increase in the gain in live weight. The gain was not as great as that made by the other eight steers, however. Lots 2 and 3 were fed on silage, hay and grain as follows: Thirty pounds of silage, twelve pounds of grain and six pounds of hay. The grain consisted of two parts chopped wheat, one part bran and one part chopped oats.

This ration is still wider than the one fed during January, being 1:7.8, and wider than that fed to steers in Lot 1. The ratio in Lot 1 is about 1:6.1—somewhat narrower than the standard. In lots 2 and 3 we endeavored to get the animals to consume as much coarse food as possible, especially of the silage, for this represented the cheapest food material at hand.

The same general plan of feeding was followed during the month of March, except that ten pounds of roots per steer were added to the ration for Lots 2 and 3, and the silage decreased the same amount. This made the ration a little narrower by reducing the carbohydrates. Lot 1 made a relatively larger gain than during the preceding month, and Lots 2 and 3 fell a little under that of the former month. However, there was only 1.9 pounds difference in the gain per steer for the entire month.

Our object in reducing the silage fed to Lots 2 and 3 was to induce the animals to eat with greater relish, as they had been fed rather heavily on silage and did not eat it as readily as during the preceding month. If the silage had been richer in grain, it undoubtedly would have been eaten with greater relish, and would have required less of other grain to make up a ration. While the silage was sweet and of a very good quality of its kind, it would not be considered rich silage.

**RESULTS.**—The steers were sold to a local butcher April 1 for 5c. per pound live weight. Their average weight when the feeding began was 861½ pounds, and when the feeding test closed, March 26th, the average weight was 983½ pounds, showing an average gain of 121½ pounds, or a daily gain of 1.4 pounds. This is not as large a gain as we might expect under more favorable conditions.

The total cost of food exceeded the value of gain in live weight. This, at first thought, would preclude any profit; but we must not lose sight of the fact that there is a profit on the original weight of the cattle. Steers sold as feeders do not command as high a price as the finished product; hence, one can expect a reasonable profit on the original weight of the animals.

While we paid a good price for the animals—\$30 apiece delivered at the farm, or an average cost of \$3.48 per hundred—there is still a profit of \$1.52 per hundred on the original weight. This, taken with the value of increase in weight, makes \$228.10 increase in value above cost. Taking cost of food—\$77.82—from this, leaves a net profit of \$150.28, or \$12.52 per head, for the feeding period of eighty-five days. In this we have not reckoned the cost of labor nor the interest on the investment. The value of the manure is an important item and will offset the labor in caring for the stock.

On the whole, the steers fed on silage throughout the entire period made the largest gains and at less cost than those fed on roots. The steers fed on silage consumed less grain. The roots fed in this experiment were carrots and mangel-wurzels. The mangels were relished better than the carrots.

The dressed carcasses were carefully weighed, thus showing the per cent of shrinkage in dressing. The average dressed weight was a little above 61%. This would indicate a fairly well finished product. The steers were weighed sixteen hours after feed and water.

The quality of meat was all that could be desired in cattle of this kind. The meat was well marbled and there was comparatively little fat on the outside. The fat was light in color and evenly distributed.

**CONCLUSIONS.**—While the average daily gain was not wholly satisfactory, it will compare favorably with that made by cattle fed in the corn States. The results are sufficiently encouraging to warrant more stock feeding in that section, and two-year-olds can be matured on the grains and fodders produced in northern Idaho. There is a profit in keeping steers for winter feeding, instead of selling an inferior and cheaper product in the fall. Corn silage can be successfully used in feeding steers in Idaho.

## THE POULTRY YARD.

### Feeding Value of Shrunken Wheat.

A poultry grower in the San Joaquin valley who uses large quantities of wheat found that he could buy plump grain for \$1 per cental and shrunken grain for 90 cents per cental. He wished to know which was the better purchase from a poultry feeding point of view and sent samples to the University



Experiment Station for analysis. The shrunken wheat was clean and good except in the shrinking of the kernels. Prof. Jaffa made analyses of the two samples with the following result:

	No. 138. Shrunken, %.	No. 139. Plump, %.
Moisture.....	8.30	9.80
Ash.....	2.34	2.00
Protein.....	17.10	11.70
Fiber.....	3.48	2.05
Starch, etc.....	66.78	72.65
Fat.....	2.00	1.80
Total.....	100.00	100.00
Full value in 1 lb. (calories).....	1,709	1,683

Commenting upon the above analyses, Prof. Jaffa writes:

"Poultry rations are usually too carbonaceous—that is, they contain too much starchy matter and not enough of the albuminoids so necessary for egg production. Consequently, the richer a food is in albuminoids the more valuable it is to the poultry feeder.

"An examination of the above table shows two main differences in the results. In the plump wheat the percentage of starch, etc., is considerably higher than the corresponding figure for the shrunken wheat, while the reverse is noted for the rating of protein, that of the latter sample being almost 50% greater than that yielded by the former, as is seen in the figures 17.10% and 11.70%, respectively. This fact alone is sufficient to warrant a feeder purchasing shrunken in place of plump wheat as a food for laying hens.

"It is barely possible that the digestion coefficient for protein in the shrunken wheat may not be as high as that for the plump, but this question we will settle at the earliest opportunity by a digestion experiment with our hens. It must not be forgotten, however, that the figure 11.70 for albuminoids in the plump wheat is a trifle below the average; and while another examination of two similar wheats would in all probability show the shrunken sample richer in nitrogen, there might not be such a marked difference as we have between the two lots under discussion."

## THE VINEYARD.

### The Asti Wine Tank.

TO THE EDITOR:—The illustration and descriptive matter which have recently appeared in the PACIFIC RURAL PRESS, relative to the half-million gallon wine tank of the Italian-Swiss Colony at Asti, Sonoma county, have been interesting, and may have whetted the appetites of your readers for more complete information concerning this remarkable contrivance. As you rightly stated, the inside of this vast vault, cut out of the solid rock, has been glazed, and holds wine as in a bottle. It has been found, however, that wine does not "age" or ripen as rapidly or satisfactorily in this immense cistern as in small packages. Therefore, the tank is now used only for the purpose of blending wine. It has also been divided into three compartments by partitions. For no purpose is such vastness in a tank desirable.

I wish to correct, however, a statement made by one of your correspondents in the PACIFIC RURAL PRESS of the 18th ult. He wrote that there had been a leakage of 50,000 gallons from the cistern, caused by a crack in the cement lining, or for some other cause. He was misinformed, as the foreman told me this was a pure fiction. There has been no loss whatever from seepage. The glazed lining has remained intact.

When this tank was first filled, it required the work of two large pumps for seven days. It is connected by a tunnel 200 feet long with the winery, and can be emptied by gravity in four and one-half days. The tank is sealed overhead, of course. After its completion the townspeople at Asti essayed to give a dance within its depths, going down by a circular stairway. The cavity was 80 feet long, 34 feet wide and 24 feet deep. The reverberation of sound from the band instruments was such that keeping time to the music was out of the question. Lack of ventilation in the vault also caused the dance to be a failure.

The only tank which can be spoken of in the same breath with the structure of the Asti Colony is the great "tun" of Heidelberg, Germany, holding 50,000 gallons. This is less than one-third the capacity of each of the compartments in the tank above described.

H. G. P.

We think there is a tank at the Malter's vineyard in Fresno which is of greater capacity than the Heidelberg affair.—Ed.

OIL WELLS, says the Bakersfield Californian, are drilled, not bored nor sunk. Water wells are bored, fortunes are sunk. An oil well is dry or a duster if it contains no oil, even though it discharges a river of water.

THE value of live stock in the United States has increased \$501,444,474 since 1896. California's share in the increase amounts to \$3,081,062.

## THE VETERINARIAN.

### A Case of Lump-Jaw.

TO THE EDITOR:—I have a four-year-old steer with a large growth of some kind of matter on his lower jaw, which the cattlemen all seem to think is the "big-jaw," or "lump-jaw." It first appeared about two years ago during autumn, and I believe it to have been caused by grass seeds. It covers nearly the whole under side of the lower jaw, grows in the form of lumps, being about 2½ inches or more thick at the back, the largest part. The skin grows over about half of it, the part exposed being a bloody red color, and when cut white streaks can be seen in it. He rubs it sometimes or it breaks of its own accord and a bloody matter oozes out. It has grown very little in size since the first six months; a few months ago I put some burnt alum on it, which caused it to decrease a little. The steer fattened last winter and is very fat at present. A cow has the same complaint, being taken at the same time. None of the cattle except these two have been affected with it, although running in the same herd. Will you please prescribe in the PACIFIC RURAL PRESS?—JOHN G. CURTS, Laytonville.

This is "lump-jaw" or actinomycosis. Apply strong tincture of iodine once daily. Give internally 2 drachms of iodide of potash once daily.  
510 Golden Gate Ave., S. F. DR. CREELY.

## MISCELLANEOUS.

### California Oil Production.

The California Petroleum Miners' Association furnishes the following as the result of careful efforts to secure fairly reliable information as to the present scale of operations. The statements are stated to be "the result of much correspondence with the best informed people of the various oil regions, the estimates of many competent authorities and the compilation of all current information."

There are 271 wells in process of sinking; of these, 142 are north of Tehachapi, mainly in the San Joaquin valley.

#### DRILLING WELLS.

SAN JOAQUIN DISTRICT.—Coalinga 32, McKittrick 29, Kern River 35; total 96.

LOS ANGELES.—Westlake Park and elsewhere 38.

SOUTH LOS ANGELES.—Whittier 11, Brea Canyon 12, Puente 7, Fullerton 14; total 44.

VENTURA DISTRICT.—Newhall 13, Piru 19, Santa Paula 11; total 43.

SANTA BARBARA DISTRICT.—Summerland 4.

KREYENHAGEN DISTRICT.—Kreyenhagen 38, elsewhere (Mendocino, Colusa, etc.) 8.

#### DAILY OIL PRODUCTION—BARRELS.

SAN JOAQUIN DISTRICT.—Coalinga 1454, McKittrick 450, Kern River 823; total 2727.

LOS ANGELES DISTRICT.—Large and small producers 4088.

SOUTH LOS ANGELES.—Whittier 725, Puente 314, Brea Canyon 150, Fullerton 875; total 2064.

VENTURA DISTRICT.—Newhall 361, Piru 868, Santa Paula 805, Callegues 20; total 2054.

SANTA BARBARA DISTRICT.—Summerland 533.

Total daily production 11,466 barrels.

#### TANKAGE—BARRELS.

LOS ANGELES.—Union Oil Co. 35,000, S. F. R. R. 40,000, Oil Storage & Transportation Co. 165,000, S. P. R. R. 45,000, Standard Oil 50,000, total 335,000.

SOUTH LOS ANGELES.—Union Oil Co.: Brea Canyon 6000, Bixby 17,000, San Pedro 35,000, total 58,000; Central Oil Co. 20,000, Home Oil Co. 4000, total 24,000. Total South Los Angeles 82,000.

VENTURA.—P. C. Oil Co.: Ventura 27,000, Newhall 20,000, total 47,000. Union Oil Co.: Santa Paula 68,000, Ventura 41,000, total 109,000. Modelo Oil Co., Piru, 4000. Total Ventura 160,000.

SAN JOAQUIN.—Kern & McKittrick 40,000. Union Oil Co.: Oil City 32,000, Coalinga 15,000, total 47,000. Chanslor & Canfield 8000. Total San Joaquin 95,000.

REFINERIES.—Puente Oil Co.: Chino 77,000, Puente 15,000, total 92,000. Union Oil Co.: Oleum 60,000. Pacific Coast Oil Co.: Alameda 60,000. Total refineries 212,000. Total tankage 884,000.

### The Menace of Fire.

From all parts of the mining area of the country come reports of devastation by forest fires, entailing loss. The deplorable destruction of private interests is even surpassed by the direct public loss. The daily press rightly reasons that drastic measures of repression must be put in force. The miscreant who deliberately burns his neighbor's property is no less a destroyer than the careless idiot who drops a cigarette in a bunch of dry grass and burns out a whole country side. Most things are becoming fool-proof, but as yet much is at the mercy of the itinerant, who, in ignorance or defiance of results, carelessly causes a fire to spread destructively over a wide area. Colorado and California have suffered great damage in this way, as have other States; and, while nearly every commonwealth has a law making such occasioning of fires a penal offense, there is little

effort at enforcement. 'Tis true there should be an era of stern repression; a few examples are needed.

Washington, D. C., reports that a scientific investigation of forest fires and reforestation on burnt areas is being pursued by the Division of Forestry through C. S. Crandall of the Colorado experiment station. This work will be carried on chiefly in the northern part of the State, where the prevalence of Lodgepole pine makes the conditions very different from those in the south. The investigation is an important one, for, until the forester knows what to expect from fire and how to deal with burnt-over areas, he can do little in a region where burning has been as extensive and is still as common as in Colorado.

In this investigation the examination of the first stages of reforestation will be made on areas of which some were burned over thirteen years ago, and on which others in government employ had already made surveys and recorded progress at different periods since. In the case of the old fires of which there is no record, the date of burning can usually be determined by the age of the trees which came up after the fire, and the necessary surveys and measurements can then be made.

Mr. Crandall will have four assistants and will begin his examination in the Medicine Bow range. From there he will work down the Continental Divide to the neighborhood of Long's peak.

SUCH words as "about" and "more or less" are often inserted in a contract of sale in order to relieve the seller from liability in cases where he has used his best efforts to deliver the amount called for. In any case in which the seller, under such a contract, has tried, to make delivery as stipulated, the courts will allow him a fair margin to cover unavoidable mistakes, and as much as 10% has in some special cases been held to be such fair margin. But the seller is never allowed to take advantage of this clause for the purpose of deliberately compelling the buyers to accept more or less than he has contracted for. The Supreme Court of the United States, for example, has held that the words "about," "more or less," and the like, used in such cases, are effective "only for the purpose of providing against accidental variations arising from slight and unimportant excesses or deficiencies in number, measure or weight." (6 Otto, 168.) In every case it is the seller's duty to weigh or measure out, and deliver, as nearly as possible, the exact amount called for by his contract. In doing so he is protected by the terms of his contract against any liability arising from the fact that it is impossible to deliver precisely the amount for which the agreement calls. But a seller cannot claim protection from the saving clause of the contract until he has tried in good faith to fulfill its main stipulation.

ALL substances are either attracted or repelled in some degree when in the field of a strong electro-magnet. If attracted, they are said to be paramagnetic; if repelled, they are diamagnetic. If a rod of any substance is suspended by a fiber so as to swing freely horizontally between the vertical poles of an electro-magnet magnetic induction takes place, and as the lines of force between the poles are essentially horizontal the effect of the pull or thrust upon rotation is greatest for the particles farthest from the axis of rotation. If paramagnetic, therefore, the effect is to pull the rod into a longitudinal or axial position, with its ends as near the poles of the magnet as possible; and if diamagnetic, the rod is pushed into a transverse or equatorial position, with its ends as far from the magnetic poles as possible.

WATER can absorb about one-twentieth of its volume of air, and all water which has not been boiled contains almost as much air as it can absorb. One pound of water at about 70° F. occupies a volume of 0.016 cubic feet, or 2.3 cubic inches, and one-twentieth of this is 0.115 cubic inch. That is, one pound of water at ordinary temperature contains about 0.115 cubic inch of air. When water is converted into steam the air which it contained passes off with the steam, and occupies a volume which depends upon the pressure and the temperature.

PROPER foundation is as necessary for a gas engine as for any other form of power application. In setting a horizontal gas engine there should be a slight slope longitudinally, downward, from the head end of the cylinder toward the crank; about ¼ inch, in the length of the cylinder will suffice, this to cause a flow of the waste oil toward the open end of the cylinder. Otherwise its tendency is to settle at the head end, and this interferes with the working of valves and igniter.

FROM a pattern made of soft pine, put together with nails, an iron casting will weigh about sixteen pounds to every pound of the pattern's weight. A brass casting will weigh eighteen pounds to each pound of the pattern's weight. An alloy nine parts lead, two parts antimony and one part bismuth will expand in cooling.

AN oil pipe line in Kern county, Cal., or elsewhere, made of glass, might be practicable. There is a concern at Port Allegany, near Bradford, Pa., that claims to be able to make glass tubes that will carry oil, and a 100-mile pipe line made of glass is said to be in successful operation in southeastern Ohio.

TO FIGURE the size of a steam pipe, an engine builder says the diameter of the steam pipe in inches equals the square root of one-sixth of the horse power of the engine.

ALL water has action on copper; hard water has little action on lead, but soft water and highly carbonated water dissolves lead in considerable quantity.

A SOLUTION of one part picric acid and seventy-five parts water will relieve an ordinary burn occasioned by the electric current.



## Agricultural Review.

### ALAMEDA.

**BEET HARVEST.**—Niles Herald, Aug. 25: The first of the new beet crop arrived at the sugar works in Alvarado Monday. There were four carloads from Pleasanton and about the same number from this township. Each day sees an increased quantity arriving; the mill will open next week. The yield in Murray township, it is said, will be double that of last year, while in Washington it is a quarter larger. The acreage is considerably more this year than last in both townships.

**SHORT HOP CROP.**—Oakland Enquirer, Aug. 24: The management of the hop yards have announced that this year's crop will not be as heavy as last year. As a rule, there are about four weeks of work for the pickers, but the most that is expected this year is twenty days of work. According to this estimate, the crop will be about three-quarters of what it was last season. The falling off is laid to late frosts more than anything else. Manager Platt, in speaking of the prospects, said that there was hope for much improvement before Sept. 5th, when picking will commence.

### EL DORADO.

**FRUIT SHIPPING.**—Placerville Republican, Aug. 23: Fruit has been going out of Placerville at the rate of four or five carloads per day this week. Pears for canning are shipped to Sacramento and Stockton. Plums and peaches are sent East and to San Francisco. The Earl Co. are buying occasionally when they have special orders, but their regular business is done on commission. Most of the orchardists are afraid of the commission business, but the Eastern market reports are better in the last few days, and more are now disposed to venture.

### FRESNO.

**WHITE LABOR VERY SCARCE.**—Fresno, Aug. 24: During the last few weeks the usual influx of Chinese and Japanese laborers into this county to work in the orchards and vineyards has taken place, but the number has been unusually large, especially for Japanese. It is estimated that at least 4000 of them have arrived here during the last three weeks. Early in the season a number of local labor contractors conceived the idea of importing Indians from Arizona, but the experiment did not work as well as was expected, and people who had grapes to pick had to resort to Chinese and Japanese. White labor is very scarce here this year and high wages are paid.

**NEW PACKING HOUSE.**—Reedley Exponent, Aug. 23: Porter Bros. Co. are fitting up their packing house here in fine shape and things look as though the company intended that Reedley should be one of its important packing points. A new stemmer is in place. It has a capacity of three carloads a day and is of the very latest improved pattern. A man can get at every part easily and change all of the parts that require changing to do good work without stopping the machine. The fruit grader and printing press are also in position. The name and brand on the boxes will be printed here and everything will be sent out as from Reedley.

### LOS ANGELES.

**WATER COMPANY INCORPORATED.**—Pomona Times, Aug. 22: Articles of incorporation of the Currier Tract Water Co. have been filed. The board of directors is composed of B. F. Randsford, L. H. Rush, W. S. Farrington, C. S. Hoff and J. C. Beck. Capital stock \$10,000, divided into 1000 shares. The company intends to at once begin developing water for the use of its members.

**PROFITS OF LEMON GROWING.**—Pasadena Star, Aug. 22: An example of the profits that may be made by the careful and intelligent culture of lemons is given in the experience of F. A. Little of Ontario. Eight years ago Mr. Little paid \$10,000 for a ten-acre lemon orchard lying near the town of Ontario, and since then he has sold several crops for over \$5000 each, one for \$7000, and this year's crop is expected to yield \$8000. This is a remarkable instance of success, but it indicates what may be done under favorable circumstances. Mr. Little spends money freely on his grove, but with equal liberality and equally careful management others can undoubtedly do as well.

**ORANGE GROWERS' ASSOCIATION.**—Pasadena Star, Aug. 22: The season just closed was a remarkably good one for the Pasadena Orange Growers' Association, the product of 111 orchards having been handled. Secretary Jones said that eighty-two carloads were sent from Pasadena, containing 29,583 boxes of fruit. This is over a third more than was ever shipped before during any one season. The returns netted the growers \$28,000. The fruit was handled at a cost of 2 cents

per box less than ever before, owing to the improved machinery. The machinery is run by electrical power at a rate much cheaper than formerly. It is estimated that the machinery will pay for itself in two years.

### MENDOCINO.

**HOP PICKERS' WAGES.**—Ukiah Press, Aug. 24: The hop growers of this valley will pay \$1 a hundred for picking this season when the help remain with them till the field is picked. Otherwise 90 cents.

**TAN BARK SHIPMENTS.**—Ukiah Democrat, Aug. 24: Already about 1500 cords of tan bark have been shipped and before the season closes there will be as much more. This is the largest quantity shipped in one year since the third year after the railroad reached Ukiah. This industry will distribute in this section about \$50,000.

**NEW CREAMERY.**—Ukiah Democrat, Aug. 24: Mr. John Conway of Elk said that the people of Greenwood, Bridgeport and Navarro had formed a company to build a creamery at Cuffey's Cove. About 3000 cows will be milked in the vicinity. There will be a skimmer both at Bridgeport and Navarro and Cuffey's Cove will be the shipping point. For the new enterprise 10% of the money has already been paid in.

### MONTEREY.

**WATER CLAIMS RECORDED.**—Salinas Index, Aug. 23: Captain W. P. Wood of the Salvation Army Colony at Fort Romie has filed for record two water rights. In one he claims 50,000 inches of water from the Arroyo Seco river to be used for the irrigation of the Fort Romie colony. A dam across will be the means employed to divert the water, thence by means of a ditch 60 feet wide and 20 feet deep. The other claim is for 50 (miner's) inches of the same stream, to be diverted about 600 feet above the main dam, said water to be used for the same purpose.

### PLACER.

**DAMAGE FROM PEACH MOTH.**—Newcastle News, Aug. 24: Growers complain that the peach moth has been working considerable injury in the orchards this year. One grower who has not sprayed for three years says he will be unable to ship about 75% of his Salways on account of the pest, but will be able to use the fruit for drying purposes. Some orchardists think they will lose about 10% of their crop, while others estimate their loss as exceeding that amount. Those who spray claim they suffer the least.

### SACRAMENTO.

**REMEDY FOR AN ASPARAGUS PEST.**—Sacramento Bee: During the past season growers suffered considerable loss by insects attacking asparagus during its early period of growth. Samples of the infected shoots were brought to the State Board of Horticulture for examination. The shoots had been damaged by an insect known as the "millipede" and also by another known as the "wire worm," the millipede eating channel-like burrows on the tender canes and the wire worms entering into the canes, eating out the pith. Both of these insects, as a rule, breed in damp places and also in fresh manure, and feed on the roots of wild grass, decaying vegetable matter, etc. Most asparagus beds are kept very free from growing weeds during cutting time, and during a dry spell both insects leave their breeding places in search of fresh food, and, not finding anything else but asparagus, attack the tender canes and destroy their market value. Many remedies have been suggested for the extermination of these pests, but it is only during dry seasons that they affect the crop materially, especially when the manure placed for fertilizing the vines has dried, and they leave in search of fresh food, and, finding no other vegetable growing, attack the first they come in contact with. For this reason remedies have not been applied as freely for these insects as they have for others; yet asparagus growers in different portions of the State have been very successful in the application of air-slaked lime with sulphur, in its dry state, to the asparagus canes as they begin to shoot out of the ground. Soot has also been applied with good success. Poisons of any kind should, of course, be avoided.

### SAN BENITO.

**FRUIT INDUSTRY.**—Hollister Advance, Aug. 24: About 400 people are employed picking and cutting fruit in the orchards of the valley. For cutting apricots and peaches 4½ cents per box is paid. The most skillful cutters earn from \$1.25 to \$1.40 per day. For picking prunes the pickers get 4½ cents per box, with a bonus of 5 cents for each tenth box. Peach pickers get \$1.50 per day. The work in the fruit will last for several weeks yet.

### SAN BERNARDINO.

**CHINO RANCH SOLD.**—Chino Champion, August 24: After a number of postponements at the foreclosure sale of the

Chino ranch property, all the right and title of the California Beet Sugar Estate & Land Co. and the Chino Estate Co. were sold to the Chino Land & Water Co. The sale was made to satisfy the bonds which were issued some years ago by the California Beet Sugar Estate & Land Co., which amounted at the time of the sale, with interest, to \$868,250. Default had been made in the payment of interest.

**LARGE SUNFLOWER.**—San Bernardino Sun, Aug. 23: A large sunflower grown on the ranch of F. M. Johnson has attained a diameter of 18 inches, while the stem is about 1½ inches in diameter.

### SAN DIEGO.

**SUCCESS WITH EGG PLANT.**—San Diego Union, Aug. 23: Maj. Hall, Pacific Beach, wonders why people do not raise more egg plant. It is easily raised when you know how, and nutritious and delicious when properly prepared. The Major says the egg plant requires an even moisture in the soil; it grows quickly and some are as large as coconuts. But the Major's good wife is no doubt the important factor in making the egg plant so serviceable and nutritious. Mrs. Hall gives this formula as the best method of preparing the egg plant: Peel it, cut it in slices as you would cucumbers, soak in water for two hours, then boil in water until soft, drain off the water and mash as you would potatoes; roll crackers fine, the finer the better, and add as much cracker as there is egg plant, to which beat in an egg, then make out into patties and fry until brown, in butter or drippings. The better the cracker and egg plant is stirred before frying the firmer will be its texture. The Major has a unique and successful way of rearing cucumbers, and as an incident of his plan has from one vine cut 750 cucumbers by actual count, and the vine is still bearing though it began work in May. The cucumber requires constant, even moisture, so a gasoline can is perforated with a small nail hole, set close to the vine and filled each night and morning, and the water slowly drips, giving the vine a limited but constant supply. The Major has just coming in bearing one vine from which he expects to cut a barrel of pickles this season. He selects only one vine from the hill.

### SANTA CLARA.

**PRUNE CROP.**—Pacific Tree and Vine, Aug. 25: Generally speaking, in talking with those who have partially completed the harvest of their crop, the opinion is expressed that the total is to be smaller even than the revised estimates that were made after taking the rather heavy drop into consideration.

**FREAK CALF.**—San Jose, Aug. 23: A freak calf was recently born on the premises of George Ebe. The calf had two mouths, one below the other; three ears, two on one side of the head and one on the other, and two tails. It seemed to have no backbone. It was necessary to feed it with a spoon, and in this way it was kept alive for some time, but finally Mr. Ebe killed the animal.

**POULTRY INDUSTRY.**—Morgan Hill Times: The poultry industry is gradually growing to be one of the important sources of income in this vicinity. No less than 25 cases, of 30 dozen each, are retailed by our storekeepers or shipped each week. A conservative estimate shows that at least as many more are consumed at home, making a total of 50 cases, or 1500 dozen eggs a week, which, if sold at the present price of 20 cents a dozen, brings a return of the snug sum of \$300 a week; It costs 50% of this to feed the poultry, so that a net profit of \$150 a week, or \$7800 a year, is the sum realized at the present time for eggs. We have no means of ascertaining the amount realized for poultry sold, but presume it equals that realized for eggs.

**PARASITES ARE THRIVING.**—San Jose Mercury, Aug. 24: So far as he has gone, County Horticultural Commissioner E. M. Erhorn has had good success in raising the African parasites, which he obtained through S. F. Leib and the Agricultural Department at Washington, D. C. "The parasites reached me," said Mr. Erhorn, "on June 14th, and I have successfully raised several colonies of the African parasites established on the oleander. The oleander, being of the evergreen species, is an easy plant on which to propagate the parasite, and it remains to be seen whether it will be successful in the orchards, although I believe it will. I have liberated several colonies in various parts of the county; but, as it takes two months to raise a brood—that is, for the parasite to go through all its stages—it is too early to make any positive assertion. I have also liberated two new species of ladybug, one to feed on the prune aphid and the other on the black scale."

### SANTA CRUZ.

**SPLENDID OBJECT LESSON.**—Watsonville Pajaronian, Aug. 23: Horticultural Commissioner C. H. Rodgers and others

interested in entomology and the extermination of fruit pests have placed on exhibition at Krough's drug store a collection of the worst parasites known to fruit growers. The collection includes orchard tent caterpillar, oyster shell scale, San Jose scale, black scale, canker worm, brown apricot scale, flat-headed apple borer, branch and twig burrower, tussock moth, greedy or willow scale, codlin moth and apple tree aphid. The affected branches, leaves and fruit of the trees are also placed there for examination. This striking object lesson will enable the fruit growers to study the habits and destructive qualities of these fruit destroyers, and they will thus be better prepared to identify and eradicate them. This line of work means much for fruit interests and should be taken up and studied thoroughly by fruit raisers. All are invited to call and inspect this collection. Each thing on exhibition is plainly labeled and the effects of its work are also shown. A liberal education along this line may be had by a close observation and study of this fine collection of the worst enemies with which fruit men have to deal.

### SONOMA.

**FRUIT COMPANY.**—To THE EDITOR: In respect to drainage and cleanliness the fruit cannery of Walden & Co. at Geyserville is a model. It lacks the advantage of being located alongside the railroad track, but it occupies a desirable site on the hillside, where good light, a dry floor and pleasant surroundings make the work of employees (of whom there are 220 to 250) almost enjoyable. Operatives at peeling, cutting, etc., are paid \$1.50 per day; foremen get relatively higher wages. The cannery thus secures the best help in the county. Only select fruit is used. This is peeled, and it is washed in the cans before the same are sealed. The pack goes entirely to New York. This season it will amount to about 25,000 cases. Last year only 6000 cases were packed. Walden & Co. also conduct a winery and distillery at the same site. The money disbursed by the firm makes Geyserville a good business town during the active season.

H. G. P.

### SUTTER.

**ALMOND CROP.**—Yuba City Independent, Aug. 24: The almond orchards near town are now employing a number of hands to gather the season's crop. The yield is generally light, compared with former years. The Drake Seedlings and Ne Plus Ultra are about up to the average. The I X L crop is light in some orchards and heavy in others. The Nonpareil is generally light.

### STANISLAUS.

**GRAIN BURNED.**—Modesto Herald, Aug. 23: E. H. Williams and Ezra B. Wood lost 140 acres of wheat by fire Sunday night. The grain destroyed was estimated as good for from six to eight sacks to the acre, and was insured for ten. Frank S. Rice of The Grange Co. in adjusting the loss found that 140 acres had been destroyed and allowed \$855.25 insurance.

### YOLO.

**FRUIT INDUSTRY.**—Winters Express, Aug. 24: The Winters Dried Fruit Co. has about cleaned up the apricot packing and will soon commence on peaches. The company packed this year over twenty-five cars of 'cots, nearly all of which went for export. Domestic dealers are slow in buying, thinking there was a big crop here and growers anxious to sell. The result was that nearly all the apricots went into the hands of exporters, who will now have a chance to make a little extra profit. The fact that such a large proportion of the apricots have been sold foreign probably helped the dried peach market, which has stiffened considerably lately. The peaches, too, have nearly all been sold, and the grower will not realize as much as he might had he held on a few days longer.

**GRAPES DISPLACING ALMONDS.**—Woodland Democrat: Charles Steinburg, who has an orchard north of Cache creek, has an engine at work pulling up 300 almond trees. The past four years have been so dry that the life of the trees has been threatened and they are almost barren. The tract will be planted to Thompson Seedless grape vines.

### OREGON.

**PRUNE PRICES.**—Salem Statesman: The Willamette Valley Prune Growers' Association has pooled fifteen or twenty carloads of Italian and French prunes, belonging to the members of the organization, and quoted the following prices, per pound, to Eastern buyers: 30s to 40, 5½ cents; 40s to 50s, 5½ cents; 50s to 60s, 4½ cents; 60s to 70s, 4½ cents; 70s to 80s, 3½ cents. While these figures are considerably above the market price, the association has made sales on this basis and there is but little doubt that the whole crop of prunes in this section will be disposed of at remunerative prices.



## THE HOME CIRCLE.

From "Endymion."

A thing of beauty is a joy forever;  
 Its loveliness increases; it will never  
 Pass into nothingness; but still will keep  
 A bower quiet of us, and a sleep  
 Full of sweet dreams, and health, and  
 quiet breathing.  
 Therefore, on every morrow, are we  
 wreathing  
 A flowering band to bind us to the earth,  
 Spite of despondence, of the inhuman  
 dearth  
 Of noble natures, of the gloomy days,  
 Of all the unhealthy and o'er-darken'd  
 ways  
 Made for our searching; yes, in spite of  
 all,  
 Some shape of beauty moves away the  
 pall  
 From our dark spirits. Such the sun, tho  
 moon,  
 Trees old and young, sprouting a shady  
 boon  
 For simple sheep; and such are daffodils  
 With the green world they live in; and  
 clear rills  
 That for themselves a cooling covert make  
 'Gainst the hot season; the midforest  
 brake,  
 Rich with a sprinkling of fair musk-rose  
 blooms;  
 And such, too, is the grandeur of the  
 dooms  
 We have imagined for the mighty dead;  
 All lovely tales that we have heard or  
 read;  
 And endless fountain of immortal drink,  
 Pouring unto us from the heaven's brink.

Nor do we more feel these essences  
 For one short hour; no, even as the trees  
 That whisper round a temple become soon  
 Dear as the temple's self, so does the  
 moon,  
 The passion poesy, glories infinite,  
 Haunt us till they become a cheering light  
 Unto our souls, and bound to us so fast,  
 That, whether there be shine or gloom  
 o'er-east,  
 They always must be with us or we die.

—John Keats.

## Benefactress of the Wyandots.

They were not really the Wyandots, but for the purpose of this story they may be called such, and they did not take themselves seriously as a boat crew. They liked better than anything else in the world to get out on the broad sweep of the Mississippi, and, at the word of their leader, to bend to the oars with a slow, rhythmic movement of the body. It seemed like something apart from the rest of the world—the dull rest of it. When they asked the crews of three Western universities to row against them it was done more in spirit of hospitality than anything else, and because the town was desperately dull and every one wanted a little excitement. It was really the girls who thought of inviting the university crews, and no one really supposed they would accept. It was an experiment merely, made because a number of young persons did not quite know what to do with themselves. But all three universities accepted the invitation of Wyandot College.

Then the town was in a pleasant ferment. The girls all ordered new gowns, houses were cleaned by enterprising housekeepers, with the expectation of many guests, for all the visiting fellows were to be entertained. Quite incidentally the Wyandots trained daily on the river, and lived at the clubhouse on the campus, and ate things which did not taste good. The girls sometime remembered the crew to say:

"Don't you get left too far behind. You mustn't disgrace us, you know." The girls had known the members of the Wyandot crew all their lives, and it is difficult to appreciate a person who has been known forever.

Only little Hattie Meredith really believed in the Wyandots. Hattie was a pale girl who did not dance because she was not strong enough, and who read too much, and was too much alone. But Nature, who amuses herself with incongruities, placed in this frail body a mind of most adventurous cast. When other girls were dreaming about party gowns or moonlight walks—with the right companion—Hattie was wondering how it would seem to be sailing

to the North, past pine clad islands, and through lonely, ice bound seas, to find the utmost solitude at the crown of the world; or she was imagining a tiger hunt from the back of an elephant, or how it would seem to stand on a pass of the Rockies and watch the sun follow the wind from the under part of the earth and swing with glorious nonchalance up to its highest place.

Hattie, who could hardly bring herself to speak to strangers at all, and who had really never discovered her curious mind to anybody, who was, indeed, as shy as a dove, had for her secret motto "Bravado, bravado, and always more bravado." But she told no one. This joke of nature's was unappreciated because unknown.

It had been her greatest diversion for the two years past to go across the common, walk over the railroad tracks and watch from the river bank the Wyandots training in their long, light craft, their bodies swaying smoothly in unison. When the boat shot along through the pale water, and the momentum of those bodies became intense, then something went "Biz, biz, biz!" in Hattie's brain, and she knew a moment of intoxication. She was elate. She liked life unutterably. Then, wearied with her excitement, her body would bid her go home and rest. When she heard that the university crews were coming, she said to herself, "Our boys must be the victors." But she never thought of saying it to any one else. Besides, no one would have cared much what Hattie Meredith said or thought. No one took much notice of her at any time.

As the days went on, she observed the growing power of the Wyandots, but she noticed, too, that they showed signs of the strain. Her cousin, who knew everything, said they were suffering from sunburn.

"They can't sleep nights," said he. "They're going almost crazy. They keep putting on salve but it doesn't seem to do any good. Actually some of them are bleeding. If the weather doesn't cloud up, they'll break down before the race comes off, and, though they're not expecting too much, they don't want to make a funk of it."

"Not sleeping!" cried Hattie, with anxiety. "Not sleeping! Why, they can't win that way! What do you mean by using salve? It keeps the pores all open and soft, and of course their skin blisters. What they need is cornstarch."

"Never heard of cornstarch being used for burns, Hattie. Guess that's a girl's recipe."

"Yes," confessed Hattie, "it is. Haven't you ever noticed how quickly the girls' noses get well after we have been on a boating picnic? The boys' noses get worse and worse and peel off."

"That's so," confessed the cousin. Well, cornstarch or no cornstarch, the boys are as near crazy as you can make 'em. They don't know what you say to 'em. I'd as soon go to a lunatic asylum as up to the campus."

That night eleven bags of cornstarch, each one containing a quart, was sent to the club house with a modest note of explanation, and the next day Hattie Meredith, walking the banks of the river, had the satisfaction of seeing the Wyandots stop in their practice every now and then to whip their arms and necks with the long, white bags.

"What have you heard from the campus?" she asked her cousin, a day or two later.

"The fellows are sleeping like tops. They can actually understand a question put to them in plain English now. Some one sent them something that cured the burns."

Hattie blushed a deep scarlet.

"Was it you Hattie? Well, of all things. What's come over you, girl?" But he smiled approvingly, and to have your cousin approve of you when he is eighteen and you are seventeen is rare indeed.

The day came. The town had never been more alive. The visiting crews had been shown every possible honor, and every one was longing for the race to be over that the festivities might begin, for it must be insisted upon that

the people had not the usual interest in the race. They had too poor an opinion of their own men, and while they did not expect the defeat to be one which would cause any of them to blush with shame, yet they apprehended that it would be sufficiently conclusive to forbid anything like a town celebration.

Long trains of flat cars built up with tiers of seats and drawn by locomotives had been put upon the tracks, the intention being to run these along beside the boats and at the same pace. On the river, too, there was all available craft and the shore was lined. Hattie Meredith had secured a place on one of the flat cars and sat there amid a great company of her kinsfolk and her friends.

The boats made a clean start, and in thirty seconds the Wyandots dropped behind an appreciable degree.

"There go our boys—backward!" called somebody. Hattie felt as if a hand had clutched her heart. The other boats forged ahead with slight vicissitudes for a few seconds more; then the Wyandots began gaining on them, got bow to bow, nosed ahead cunningly, and then swept on with a full stroke and led the race.

A thrill went through the people. That form of patriotism which stirs the breast of the patron of home sports was awakened in them. Their minds underwent a complete transformation. In a moment they ceased to be disinterested spectators and became fanatical advocates.

"They're ahead! They're ahead!" they screamed. They fell on each other's necks; they shouted to the blue heaven; they waved handkerchiefs, coats, hats, and the locomotives, unwillingly to be voiceless amid the popular clamor, whistled their shrillest.

Now, at the last, Hattie, the hero worshipper, felt the thrill for which she had always longed. Now she had the glorious satisfaction of beholding the triumph of her chosen. The ecstasy of enthusiasm which she felt became almost overwhelming, and it is doubtful if she had consciousness enough left to really see the boat when it shot past the stake, and the plaudits of the astonished multitude announced the victory of the Wyandots.

There were tremendous jollifications that night. Hattie had been bidden to them, but she was disinclined to go. No young man had asked for her company, and her cousin had, cousinlike, gone off with another girl. She sat in the quiet living room, where her mother rocked and fanned herself peacefully and her father nodded over his paper, and wondered how it would seem to be a popular girl. She concluded it must be pleasant. It must also be exceedingly fine to have a pretty frock. She looked down at her plain lawn with feelings of mixed satisfaction. It was not the sort of frock she would have liked. But then it did not matter. No one would see her in it. She might go out on the front porch and watch the sky rockets; but, all things considered, perhaps it would be as well to go to bed and forget how lonesome she was.

What was that remarkable noise? A murmur of many voices, a confusion of laughter, and the tramp of many feet! It was a most unaccustomed turmoil for that quiet street. Father Meredith sat bolt upright to listen. Mother Meredith stared, fan suspended and mouth open. Hattie, pale and still as usual, indulged herself in these exciting sounds, but did not let her face show her delight. The sounds ceased apparently just beyond the porch, and on the warm summer air broke a chorus of male voices:

Stars of the summer night,  
 Far in yon azure deeps  
 Hide, hide your golden light.  
 She sleeps,  
 My lady sleeps,  
 Sleeps.

Now of all agreeable things there is none more agreeable than the sound of a serenade when young men sing in the bland darkness, and of all serenades none can be so beautiful as the one that is sung to you, if you be a girl. Hattie was a girl who had not known many pleasures of the lighter sort—the sort

which come from having the world in general, and the opposite sex in particular, regard you in a complimentary manner. Therefore her delight was all the greater.

Of course it seemed like a dream. It was still more like a vision of that starlight night when she ventured coyly on the porch and heard the shouts that rent the air at her appearance.

"Cornstarch bags! Cornstarch bags! How can you tell a Wy-and-dot? By his cornstarch bags." Three times they yelled it—young and old, girls and boys, men and women, for there was a great concourse of merry-makers out among the Meredith maples, and after the last repetition there came the concluding shout "Hattie Meredith!"

By every course of reasoning Hattie, who had never been in a conspicuous place before in her life, ought to have been overwhelmed with confusion. But she was nothing of the sort. She bowed and smiled and fairly danced, standing on tiptoe to wave her acknowledgments to the farthest member of the crowd, and when the rout turned for the village, running, leaping, laughing, shouting and singing, she of all knew the uttermost emotion of youth and carelessness.

But none took notice of this latter victory—the triumph of a soul over a fatal reticence.—Chicago Tribune.

## Has It Ever Occurred to You?

Has it ever occurred to anybody to consider what, sooner or later, would be the effect upon the mass of their fellow beings if a company or fellowship of men and women of recognized social leadership should bind themselves together to illustrate in their habits of life, simplicity of attire, modesty of equipage, inexpensiveness in the appointments and chasteness in the aspect, proportions, furniture and decorations of their dwellings; should further bind themselves to discourage the habit of excessive accumulation; to employ for art, science, philanthropy and religion all beyond a certain proportion of their income; should devote a certain fixed time in every day to other human interests than their own; should devise and themselves co-operate in plans for softening the rigors of life to the less fortunate, and for bringing into the full monotony of the modern conditions of manual labor, so far as might be, brightness and cheer; seeking in one word to redeem our modern life of the tawdry, sordid, self-indulgent aspect which is too often, at what we call "the top," its dominant and prevailing note? For myself, I believe that, wild and visionary as such a suggestion doubtless sounds to many, there are men and women, in far greater number than most of us dream of, who would hail it as—for themselves, at any rate—a way out of a situation which, with our modern extravagance on one hand and our modern conditions of poverty, degradation and despair largely untouched, unrecognized and unredeemed on the other, is to many earnest natures as intolerable as it is appalling.—Bishop Potter.

## Medicinal Qualities of Fruits and Vegetables.

There is not a single garden vegetable which has not a medicinal quality aside from its food value, states a writer in *Women's Idea*. The first thing to come in the spring is asparagus, valuable in all kidney complaints, and a most delicious dish. Then we have rhubarb, which counteracts the effects of the usual heavy meat diet of winter and clears the system of some of the acids that produce dyspepsia, rheumatism and other painful maladies. Radishes are good for stomach troubles, dandelion greens make a good blood purifier, horseradish is a tonic and makes the appetite good. Onions cure colds and bring sweet sleep, and celery and lettuce soothe the irritated nerves. Carrots are good for scrofulous tendencies; cucumbers are wholesome and cooling, notwithstanding the bad reputation they have; parsley is known as a palliative in cases of dropsy. The whole list of vegetables might be named and a positive medicinal value given to



each of them. A well filled garden, the products of which are used regularly in the family, furnishes a variety of medicinal agents which meet the requirements of a large number of people and fortify them against the germs of disease, giving them immunity from attacks that would prostrate them if they were not defended by the use of a rational diet.

#### Mount Rainier.

"Like autumn leaves the years may fall upon  
His brow from off the ancient tree of Time,  
Yet will he tower above the dust and grime  
Of Earth; the first pink petals of the dawn  
That bloomed into the flower of day; the wan  
And hesitating moon's first skyward climb  
He viewed in silent majesty sublime;  
The fir proclaims him King; the great seas fawn  
And weave fair garlands at his feet; each stream  
Salutes with flashing sword; the wildest storm  
That beats against his massive breast  
ne'er mars  
The deep serenity of his white dream.  
At night how vaguely grim his awful form  
High looming in God's wilderness of stars!"

—Ainslee's Magazine.

#### The First Trousers.

According to George MacAdam, who writes "About Clothes" in St Nicholas for September, the first pantaloons or trousers were made in Assyria. In the reign of King Asshurizirpal (883-858 B. C.) horses were introduced in the army as cavalry. Here, now, was a problem: the cavalryman had to have some sort of a uniform, and it was impossible for him to wear a skirt and ride astride a horse. The tailors to his Majesty's armies wagged their heads a long time over this problem, and finally decided that the only way out of the difficulty was to cut the cavalryman's skirt from hem to waistband in both front and rear, letting each part fall on its respective side of the horse. As can readily be imagined, this split skirt made an exceedingly poor article of clothing. The law of heredity, however, is full of surprises; this humble apology for a garment was destined to be the father of the original pantaloons. It is likely that even then, as now, it took "nine tailors to make a man." At any rate, it took the tailors of Assyria over a century to solve the problem of the horsemen's clothing. "Why not," said one of these workers with the needle and shears, "sew together the edges of each division of the skirt and thus form a separate skirt for each leg?"—or, in other words, he invented a pair of pantaloons.

#### Suggestions for American Parents.

"The attitude of American parents and children toward each other always surprises a Chinaman, and impresses him unfavorably," states Hon. Wu Ting-fang. "His whole nature is imbued with filial ideas so radically different from those current here that it is almost impossible for him to appreciate the American point of view. The Chinese parent expects implicit obedience on the part of his child, and he is not disappointed in his expectations. American children are sometimes obedient, but not always. The Chinese parent governs by authority, the American by affection. The Chinese parent says solemnly to his child: 'It is your duty to obey me. All the authority of law and custom demand it. You must!' The American parent says: 'I shall be displeased if you don't obey me, and you shan't have any more sugar plums.' Both systems have their advantages and disadvantages. The American way allows more personal freedom, and is consistent with the spirit of the American Constitution; but I sincerely believe that the Chinese method makes children more obedient and respectful. Respect to elders is one of the cardinal virtues inculcated by our great sage Confucius. In our eyes, it is a sin to disobey one's parents; a breach of duty not to support them in old age."—Frank Leslie's Monthly.

#### September.

September—dreams are in the sound—  
Dreams in the warm and yellow ground,  
Dreams in the ripening leaves of trees,  
And in the drone of lazy bees,  
And in the haze upon the hills,  
And in the sleepy meadow rills;  
Dreams in the soft, fruit-scented air  
That wafts away the lightest care;  
Dreams full of whispers in the corn  
That heaps the stubble newly shorn.  
—Frank Leslie's Monthly.

BUILD as thou wilt, unspoiled by praise or blame.  
Build as thou wilt, and as thy light is given;  
Then, if at last the airy structure fall,  
Dissolve and vanish, take thyself no blame—  
They fall and they alone who have not striven.

—Thomas Bailey Aldrich.

#### How to Make Home Attractive.

How can we make the home more attractive so as to retain the youth on the farm? asks a writer in Northwest-Pacific Farmer.

In order to do this one must begin quite early in the child's life to create an interest in all that pertains to farm life and encourage the child to help with the different duties from an interest of their own, and not simply because we want the work done. This interest can be instilled into the child's heart by giving them something of their own to work on, or by letting them do the work which is allotted to them after their own ideas, instead of insisting on its being done in exactly the same way that our forefathers did it. Even though we sometimes lose a little by giving the child their way, we will profit in the end by the benefit the experience has done our child and the greatest respect they will have for us for letting them try.

Far too many parents think they cannot trust their children to go to market, insisting that they can do better, which may be true, but when will the children learn to have confidence in themselves or learn the value of money if they are never entrusted with anything? And what child does not long to get away from home and the farm if he is never trusted with any of the more important duties? We should also be very careful as the children grow older to not overestimate our control, for if they are always held in the strictest bonds they will gradually lose their great and true respect for their parents and will when old enough have no scruples in breaking bonds entirely and, consequently, leave the home that has so few attractions for them, while on the other hand if we allow them their way sometimes and then carefully point out the defects of their action they can be convinced that mother or father's advice was best and at the same time greatly increase the respect for their parents. Then too, we should see to it that good books and music are furnished for those whose talents run in that direction, also with cheerful company whenever practical.

Young girls should be encouraged to take an interest in the home decoration and fancy work, sewing, etc. A great many parents look over or consider it nonsense for girls to spend their money and time on such things, but if they could only realize how much it would endear the young girl to her home if she were permitted to indulge her fancy in this line to some extent I think every parent would be willing to allow the girls to spend a few dimes in this way. Or if they were allowed a share of poultry or other production they could raise, what an interest they would take in home life.

The boys also should have property of their own to do with as they like, for if they have been taught the value of things they are not going to squander what is intrusted to them. And what boy would not hurry home from school with a lighter heart to do the chores if among them were care of his own calf, or pig, or horse, and with what pride he would show his young friends his well-cared-for horse, for the boy who has such pets of his own will never be cruel to animals like the one who only cares for other people's horses and stock.

#### Violets and the Napoleons.

It is said that when Napoleon once asked Josephine what gift he should bring her on her birthday she said: "Only a bouquet of violets." It was impossible to get the violets from the gardeners of Paris and Napoleon sent to Versailles for them. While he was waiting for them on the morning of Josephine's birthday he received from an unknown hand a splendid bouquet of violets. Mounting his horse he rode with all speed to Malmaison, where he presented the violets to his wife. From that day the violet was Napoleon's favorite flower and his wife always had violets about her. They were planted on her tomb after her death. Napoleon had violets planted at St. Helena. During his exile the wearing of a bunch of violets was understood to be an indication that the wearer of the flowers was friendly to Napoleon. After Napoleon's death and when his remains had been restored to France, the moment the casket reached French soil it was literally covered with wreaths and bouquets of violets. When Louis Napoleon was waiting in the room of a Paris hotel to learn if he had been chosen President of the Republic, he noticed that the landlord had placed on the mantel and the window sills costly vases filled with beautiful violets. When he became Emperor he remembered in a substantial way this kindness and courtesy on the part of the landlord.

The President often visited the villa of a Spanish family living near Paris. The eldest daughter of the house was the chief attraction. She was disposed to reject his attentions at first, but one evening at a large assembly at her mother's house Eugenie appeared in an exquisite violet costume with violets in her hair and a large bouquet of them in her hand. Her gown was looped up with them and there were knots of violets on her shoulders. It was at once understood by the guests that the beautiful Eugenie had consented to become the bride of Louis Napoleon. In the early days of the second empire, the 15th of November, the name day of the empress, a perfect ovation of violets would be offered to her. Hundreds and thousands of the lovely delicate bowers were flung over the railings of the Tuileries and the servants piled them up into great pyramids reaching to the windows. There were violets everywhere and the air was perfumed with them. To this day the violet is one of the most popular flowers in France.

#### Baths and Bathing.

What is called an insensible perspiration is constantly taking place from the human body. A large amount of effete, wornout, poisonous matter is thrown off in this way every day. If a man were varnished over, completely closing up the pores of the skin and preventing this insensible perspiration, death would result very soon. The good results and the necessity of bathing must be seen by every one who gives this subject even a little thought. The constant perspiration that goes on produces, by and by, a gummy or coated condition of the skin that cannot be thoroughly removed without soap and warm water. This should be had at least once a week. Some people claim that a Turkish bath is necessary for thorough cleanliness. It is certainly very effectual for this purpose and affords a most luxurious way of achieving healthy conditions.

Hot air baths are, in many cases, an excellent substitute for the hot water and the Turkish bath; they can be taken in any private room, and this has its advantages. A cabinet, such as is sold in many of the drug stores now, an alcohol lamp, two or three ounces of alcohol, and two or three towels, and one is equipped for a charming bath of this kind. Just before retiring at night is the best time for this bath.

A cold cloth bath is easily taken just after getting out of bed in the morning. It takes but little time—three or four minutes is quite enough—and the good effects cannot well be overestimated. It cleanses and gives tone to the skin, renders one less liable to taking cold,

and acts as a tonic to the whole body. These baths become a luxury; in fact, there is hardly any useful bath that is not a luxury, if properly taken. Sun baths, oil baths, and salt rubs are all good, particularly for delicate people and invalids. A full bath of any kind should not be taken just before or soon after a full meal or when very tired.

The open-air friction bath, with hair mittens, ought to be more common than it is. Before retiring at night is the best time for this. The morning is also a good time, particularly if the cold bath is not taken, or it may follow this bath with good results.

Cleanliness is said to be next to godliness, and no one can keep clean without frequently washing the entire body.

Persons in poor health would be the better for having advice as to the baths best suited to individual cases.—Los Angeles Express.

### DOMESTIC ECONOMY.

#### Domestic Hints.

**WATERMELON HALF FROZEN.**—Cut the melon in half, remove the ripe portion, and with a fork break into small pieces, discarding the seeds. Put in the freezer can without the dasher and let stand about an hour, packed in ice and salt. Serve in sherbet glasses or in the half shell of the melon, chilled, and its upper edge cut into points. The base may be garnished with nasturtiums and leaves.

**CHICKEN PUDDING.**—Dress and cut one chicken into small pieces, put into a small pan with a little water and season until it begins to grow tender, take out and put into a large pudding dish. To one quart of green corn (canned may be used) add three well-beaten eggs and one pint of sweet milk; season with salt and pepper and pour over the chicken. Dredge with flour, lay bits of butter over the top and bake until done.

**RASPBERRY, STRAWBERRY OR CURRANT SYRUP.**—Crush the fruit and to every quart of it add one pint of water. Let this stand over night. Next morning express the juice, and to each pint allow a pound and a half of sugar. Put over the fire, boil for twenty minutes, skimming often. When cold bottle and seal. This cannot be used as a cordial, but a teaspoonful of it added to a glass of iced water makes a refreshing drink, and it is of use in flavoring jellies, blanc manges, icings, etc.

**PEACH JELLY.**—Wipe the fruit carefully (which should be free from stones and not too ripe) and cut it into quarters. Crack the stones and break the kernels into small bits. Put the peaches and the bits of kernel into a covered jar; set them in boiling water and let them boil until they are soft. Strain through a jelly bag until all the juice is squeezed out. Allow a pound of sugar to a pint of juice. Put the sugar and juice into a preserving kettle and boil twenty minutes, carefully attending to the skimming.

**EGG PLANT WITH DRESSING.**—Cut the eggplant in two, take out all the inside and put it in a pan with a cupful of chopped chicken, veal or any meat you wish, cover with water and boil until tender; drain, add one tablespoonful of butter, a small onion chopped fine, salt and pepper and two tablespoonfuls of bread crumbs; mix well, fill each half of the hull, put a little butter in each, and bake twenty minutes. In preparing eggplant keep in water until ready to cook, as the air will turn it black.

**POTATO CROQUETTES.**—Boil six good-sized potatoes and mash smoothly, with two tablespoonfuls of cream, piece of butter the size of a walnut, one teaspoonful of salt and a dash of cayenne. Whip the yolks of two eggs lightly and add to the potatoes, together with one teaspoonful of onion juice, a teaspoonful chopped parsley and a grating of nutmeg. Stir over the fire until the mixture recedes from the sides of the pan. Remove, and when cool form into cylinders. Dip first into eggs, then into bread crumbs and fry in a deep kettleful of boiling fat.



## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Aug. 29, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Sept.	Oct.
Wednesday.....	72 3/4 @ 73 3/4	74 @ 74 3/4
Thursday.....	73 1/4 @ 74 1/4	74 1/2 @ 75 1/2
Friday.....	74 @ 75	74 1/2 @ 75 1/2
Saturday.....	74 1/2 @ 75 1/2	75 1/2 @ 76 1/2
Monday.....	73 3/4 @ 74 3/4	74 1/2 @ 75 1/2
Tuesday.....	73 3/4 @ 74 3/4	74 1/2 @ 75 1/2

\*Holiday.

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	Sept.	Oct.
Wednesday.....	5s 10 1/2 d	6s 0 1/2 d
Thursday.....	5s 11 1/2 d	6s 1 1/2 d
Friday.....	5s 11 1/2 d	6s 1 1/2 d
Saturday.....	5s 11 1/2 d	6s 1 1/2 d
Monday.....	6s 0 d	6s 2 d
Tuesday.....	6s 0 1/2 d	6s 2 1/2 d

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec., 1900.	May, 1901.
Thursday.....	1 09 3/4 @ 1 11 1/4	1 15 @ 1 14 3/4
Friday.....	1 11 1/4 @ 1 10 3/4	1 15 1/2 @ 1 16
Saturday.....	1 10 3/4 @ 1 09 1/4	1 14 3/4 @ —
Monday.....	1 10 3/4 @ 1 09 1/4	1 15 1/2 @ 1 15
Tuesday.....	1 10 @ 1 10 3/4	— @ —
Wednesday.....	1 11 1/4 @ 1 11 3/4	— @ —

## WHEAT.

There was a little movement upward in speculative values for wheat, immediately following last review, December wheat touching \$1.11 1/2 on the San Francisco board, being nearly 5c above the lowest point of the week. Wet and damaging weather in a considerable portion of the wheat area tributary to Chicago, and also unfavorable harvest weather in some parts of Europe, were assigned as the causes for the firmness developed, and it looked as though an improved spot market was going to be experienced. The strength was short-lived, however, the local market receding to \$1.09 1/2 for December wheat on Saturday last, with \$1.09 1/2 the closing figure on Monday for above option, the weakness at the same time on the Chicago board being more pronounced than here. The outward movement of wheat from this port continues of very light volume, and the quantity being cleared from Oregon and Washington is decidedly small, as compared with the amount available. The crop in Oregon and Washington is reported to be 35,000,000 bushels and the carry-over 5,000,000 bushels, or a total of 1,200,000 tons, leaving a surplus for export of fully 800,000 tons. In this State it is now estimated there will be an exportable surplus, including carry-over of about 350,000 tons. The visible supply in the United States east of the Rockies is reported at 49,966,000 bushels, indicating an increase of only 205,000 bushels. At close, options were again firmer, December wheat touching \$1.11 1/2 at today's noon session.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, \$1.09½@1.11½.	
May, 1901, delivery, \$1.14½@1.15½.	
Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at \$1.11½@1.11½; May, 1901, \$—@—.	
California Milling.....	\$1 07½ @ 1 11¼
Cal. No. 1 shipping, alongside.....	1 05 @ 1 07½
Oregon Valley.....	1 05 @ 1 07½
Washington Blue Stem.....	1 05 @ 1 10
Washington Club.....	1 02½ @ 1 07½
Off qualities wheat.....	1 00 @ 1 02½

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-1900.	1900-01.
Liv. quotations.....	6s 1d @ 6s 2d	6s 1d @ 6s 4 1/2 d
Freight rates.....	31 1/2 @ 33 1/2 s	38 1/2 @ 40 s
Local market.....	\$1 06 1/4 @ 1 08 1/2	\$1 05 @ 1 07 1/2

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

Market is slow and presents an easy tone. While in quotable values there have been no recent changes, full figures current are difficult to obtain in other than a small way, and then mostly for marks well and favorably known. There are fairly liberal quantities of flour offering in this center, especially as compared with the limited inquiry being at present experienced.

Superfine, lower grades.....	\$2 25 @ 2 50
Superfine, good to choice.....	2 60 @ 2 80
Country grades, extras.....	3 15 @ 3 40
Choice and extra choice.....	3 40 @ 3 65
Fancy brands, jobbing.....	3 60 @ 3 75
Oregon, Bakers' extra.....	2 90 @ 3 25
Washington, Bakers' extra.....	2 90 @ 3 40

## BARLEY.

For desirable shipping grades the market has continued moderately firm at about same range of value current for several weeks preceding. For exceptionally desirable lots as to quality, quantity and location, slightly higher figures are possible than are warranted as quotations. Although more Barley than Wheat has been shipped from this port the past month, the quantity of Barley cleared thus far this season is little over half the amount shipped during corresponding period in 1899, or less than 30,000 tons this season, as against over 50,000 tons a year ago. Business in feed descriptions was not brisk, and for the ordinary run of offerings the market inclined against sellers.

Feed, No. 1 to choice.....	72 1/2 @ 75
Feed, fair to good.....	67 1/4 @ 70
Brewing, No. 1 to choice.....	82 1/2 @ 87 1/2
Chevalier, No. 1 to choice.....	92 1/2 @ 97 1/2
Chevalier, No. 2.....	80 @ 85
Chevalier, poor.....	72 1/2 @ 75

## OATS.

The same strong tone previously noted continues to prevail in the Oat market, the strength being the result of tolerably heavy Government and export requisitions for this cereal. Especially is the market for fancy White and Surprise Oats in healthy condition, these being in light stock and in good request, both for shipment and on local account. Spot supplies are principally colored descriptions.

White Oats, fancy feed.....	1 30 @ 1 35
White, good to choice.....	1 20 @ 1 27 1/2
White, poor to fair.....	1 10 @ 1 17 1/2
Gray, common to choice.....	1 12 1/2 @ 1 25
Milling.....	1 25 @ 1 40
Surprise, good to choice.....	1 25 @ 1 35
Black Russian.....	1 05 @ 1 20
Red.....	1 07 1/2 @ 1 25

## CORN.

Conditions and quotable values of this market have not changed materially since last review. Spot supplies continue to be of very moderate proportions and are mostly Eastern product. That the market will be any more favorable to buyers in the near future than at present is not probable.

Large White, good to choice.....	1 22 1/2 @ 1 25
Large Yellow.....	1 20 @ 1 22 1/2
Small Yellow.....	1 50 @ —
Eastern, in bulk (carload lots).....	1 15 @ 1 17 1/2

## RYE.

Although there are no heavy stocks in this center, the demand is light and the market cannot be termed favorable to sellers.

Good to choice, new.....	90 @ 95
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## BUCKWHEAT.

There is none on market at present, and values are consequently nominal for the time being.

Good to choice.....	1 90 @ 2 00
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## BEANS.

The main feature of the market is the stiff figures current for Small Whites and Lady Washingtons, more particularly for the former, as supplies of the same are mostly under control of one firm and are practically out of the market, being held against Government contracts. New crop Lady Washingtons are already arriving. It will be several weeks before new crop Small Whites will put in an appearance in quotable quantity. Business in colored beans is light and at generally unchanged values.

Pea, fair to good, 100 lbs.....	— @ —
Small White, good to choice.....	3 75 @ 4 00
Lady Washington.....	3 00 @ 3 25
Pinks.....	2 65 @ 2 75
Bayos, good to choice.....	2 65 @ 2 75
Reds.....	3 25 @ 3 75
Limas, good to choice.....	5 25 @ 5 35
Black-eye Beans.....	3 25 @ 3 50
Horse Beans.....	1 75 @ 2 25
Garbanzos, large.....	2 50 @ 2 75
Garbanzos, small.....	2 00 @ 2 25

Late advices by mail from New York give the following review of the bean market, prices quoted being per 60-lb. bushel:

There has been no special activity to the market this week, but the recent dry weather has damaged the bean crop in this State to such an extent that the country holders are showing more confidence, and early in the week considerable stock was ordered under such high limits that it was practically off the market. During the week rain has prevailed in many sections, but holders here were confident and asked higher figures and buyers have felt the position warranted the advance and have not offered much resistance to paying the higher rates. The export demand has been light, only about 50 barrels Red Kidney for the week and 200 barrels Marrow, though exporters are still taking imported Marrow and 300 bags have been disposed of at \$1.65. Marrow have worked up fully 5c., with \$2.07 1/2 generally asked at the close. Medium have been rather quiet and not exceeding \$1.82 1/2. Pea eased off to \$2, but close firmer and higher. The little export business in Red Kidney was on the basis of \$1.80 f. o. b., but tone stronger

at the close, and some few sales a trifle higher; but some very nice stock has cleaned up at \$1.70 @ 1.75. White Kidney unchanged in price, but tone stronger. Yellow Eye very quiet. Black Turtle Soup have more inquiry and about 5c. higher at the close. California Lima in few hands and held firmly at \$3.55. Foreign beans have sold well. Green peas steady.

## DRIED PEAS.

Market is lightly stocked and firm, particularly for choice Green or Blue peas. Humboldt county is the principal point of production in this State, and the crop there is small, owing to the ravages this season of a worm.

Green Peas, California.....	2 40 @ 2 50
Niles Peas.....	2 15 @ 2 25

## WOOL.

While the market has shown steadiness as regards quotable values, with holders displaying no uneasiness, preferring to carry rather than to unload at less than current rates, the movement during the past week has been light. Most of the bright and free wools in this center have already passed into second hands. Stocks now here will have to depend mostly on scourers for an outlet. Large quantities of wool are being held in the interior, awaiting a more favorable market.

## SPRING.

Humboldt and Mendocino.....	16 @ 18
Northern, free.....	14 @ 16
Northern, defective.....	11 @ 13
Middle Counties, free.....	14 @ 16
Middle Counties, defective.....	11 @ 13
Southern Mountain, 12 mos.....	8 @ 10
Southern Mountain, free, 7 mos.....	9 @ 11
Southern Mountain, defective, 7 mos.....	8 @ 10
Oregon Valley, fine.....	17 @ 19
Oregon Valley, coarse to medium.....	16 @ 17
Eastern Oregon, choice.....	15 @ 16
Eastern Oregon, fair to good.....	11 @ 14
Nevada, as to condition.....	14 @ 16

## FALL.

San Joaquin.....	7 1/2 @ 10
San Joaquin Lambs.....	8 @ 9

## HOPS.

A shipment of 50,000 lbs. old hops, about 250 bales, went forward this week by sailing vessel for Melbourne. Present offerings of old are light and are mostly low grade, for which there is no inquiry. New are expected soon on market, as picking has already begun in some of the early sections. Good to choice new to arrive remain quotable at 10 @ 12c., with growers as a rule not inclined to contract at the figures named.

Good to choice, 1899 crop.....	8 @ 11
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The following report of the hop market, furnished by a New York authority, comes through by mail of recent date:

While there is little, if any, change in the general position of the hop market, the outlook is considered favorable. The production of beer has rapidly increased in this country, the reports giving an increase of about 3,000,000 barrels for the year ending July 1, while the estimated yield of hops for this year is lighter. There has been no surplus of hops since 1895, and it is thought the bulk of 1899 growth will be closely absorbed before the new crop is marketed. Latest reports indicate a good quality of hops from all sections of this country, but those best informed estimate the yield as fully 10% less than last year, the shrinkage being on the Pacific slope. German advices are favorable with predictions of about the same yield as last year. English advices indicate the yield this year to be two-thirds less than last year. Brewers are showing some interest and picking up occasional lots, but the general disposition is to work down the old holdings. The market has shown little change, though the general tone appears to be a little firmer and more confident.

## HAY AND STRAW.

Values for hay show no quotable decline, but there has been no firmness, and only by concerted action of the leading dealers, who are heavy holders, have prices been maintained at current range. Decreased receipts and a reduction in accumulations are looked for soon, and a healthier market will then most likely follow. Straw is not in very heavy spot supply, and is in moderate request at the prices ruling.

Wheat.....	8 00 @ 12 00
Wheat and Oat.....	8 00 @ 11 00
Oat.....	7 00 @ 10 00
Barley.....	5 50 @ 8 50
Volunteer.....	4 50 @ 6 50
Alfalfa.....	6 00 @ 7 50
Stock.....	5 00 @ 6 50
Compressed.....	8 00 @ 12 00
Straw, 1/2 bale.....	25 @ 37 1/2

## MILLSTUFFS.

Stocks of Bran were more than sufficient for the demand, but holders were not inclined to accept less than rates lately current. Middlings and Shorts were in light supply and also in very limited request. Rolled Barley market presented a rather weak tone. Milled Corn was quite steadily held.

Bran, 1/2 ton.....	12 00 @ 13 00
Middlings.....	15 00 @ 18 00
Shorts Oregon.....	13 00 @ 15 00
Barley, Rolled.....	16 00 @ 16 50
Cornmeal.....	25 00 @ 25 50
Cracked Corn.....	26 50 @ 27 00

## SEEDS.

Business in Mustard Seed is not active, immediate offerings being entirely too limited to admit of heavy trading, to say nothing of buyers being disposed to operate very slowly at present prices. Most of the business doing is on local account. Market on other seeds quoted herewith is quiet and there are no appreciable changes to record in values.

	Per ctt.
Mustard, Trieste.....	3 25 @ 3 50
Mustard, Yellow.....	4 25 @ 4 50
Flax.....	2 00 @ 2 50
	Per lb.
Canary.....	3 1/2 @ 4
Rape.....	2 @ 3
Hemp.....	3 1/2 @ 4

## BAGS AND BAGGING.

Grain Bag market is weak, and dealers are making no effort to suppress or disguise the weakness, looking on it as rather favorable under existing conditions of affairs, as it will tend to check importations for coming season. In Fruit Sacks there is a moderate movement at generally unchanged values. Wool Sacks are quiet at previously quoted range of prices. Bean Bags are receiving a little attention at fairly steady figures.

Calcutta Grain Bags, buyer June-July.....	— @ —
Calcutta Grain Bags, spot.....	5 1/2 @ 5 3/4
San Francisco Grain Bags, 22x36, spot.....	5 1/2 @ 5 3/4
State Prison Bags in lots of 2000, 1/2 100.....	5 65 @ —
Wool Sacks, 4 lbs.....	— @ 32 1/2
Wool Sacks, 3 1/2 lbs.....	— @ 28 1/2
Fleece Twine.....	7 1/2 @ —
Gunnies.....	— @ 12 1/2
Bean Bags.....	4 1/2 @ 5 1/4
Fruit Sacks, cotton.....	6 1/2 @ 7 1/4

## HIDES, PELTS AND TALLOW.

The Hide and Pelt market is very quiet and lacking in firmness, prices here being above the parity of those now current East. Tallow is in moderate request at prevailing figures, demand being about equal to the supply.

## HONEY.

The first noteworthy shipment abroad this season was made the current week, the British ship Afghanistan, clearing on the 25th inst. for Liverpool, taking 404 cases Extracted. Market for all descriptions is firm at the quotations, with stocks light.

Extracted, White Liquid.....	7 1/2 @ 8
Extracted, Light Amber.....	6 1/2 @ 7 1/4
Extracted, Amber.....	5 1/2 @ 6
White Comb, 1 lb frames.....	12 @ 13
Amber Comb.....	9 @ 11
Dark Comb.....	8 1/2 @ 7 1/4

## BEESWAX.

A shipment of 5,458 lbs. went forward this week by sailing vessel for Europe. More than is offering could be readily accommodated with custom at prevailing values.

Good to choice, light, 1/2 lb.....	26 @ 28
Dark.....	24 @ 25

## LIVE STOCK AND MEATS.

Beef is meeting with fair custom at current figures, values showing no appreciable change. Market for Mutton and Lamb has not fluctuated lately to any noteworthy degree, best qualities commanding full current rates. Veal market is steady for Large and firm for Small, with latter scarce. Hogs are bringing about as good prices as previously noted, the immediate offerings meeting with fair demand.

Beef, first quality, dressed, net 1/2 lb.....	6 @ —
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## Horse Owners! Use

GOMBAULT'S  
**Caustic Balsam**

A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or bluish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.  
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WOOL, GRAIN, FLOUR

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Personal attention given to sales and liberal advances made on consignments at low rates of interest.



Beef, second quality.....	5 1/2 @	—
Beef, third quality.....	5 @	—
Mutton—ewes, 6 1/2 @ 7 1/2; wethers.....	7 @	8
Hogs, hard grain fed, medium.....	5 1/2 @	6
Hogs, small, fat.....	5 1/2 @	6
Hogs, large, hard.....	5 1/2 @	—
Hogs, feeders.....	5 1/2 @	5 1/2
Hogs, country dressed.....	6 @	6 1/2
Veal, small, # lb.....	8 @	10
Veal, large, # lb.....	8 @	—
Lamb, spring, # lb.....	8 @	8 1/2

## POULTRY.

There were no very heavy receipts of California poultry, but in connection with three to four carloads of Eastern per week, there was enough for the demand. Poultry in poor flesh met with slow custom at rather low figures. Fowls in desirable condition sold to about as good advantage as preceding week.

Turkeys, live hens, # lb.....	11 @	12
Turkeys, live gobblers, # lb.....	9 @	10
Hens, California, # dozen.....	3 50 @	5 00
Roosters, old.....	3 50 @	4 00
Roosters, young (full-grown).....	3 50 @	5 00
Fryers.....	3 00 @	3 50
Broilers, large.....	2 50 @	3 00
Broilers, small.....	2 00 @	2 50
Ducks, old, # dozen.....	3 00 @	4 50
Ducks, young, # dozen.....	3 00 @	4 50
Geese, # pair.....	1 25 @	1 50
Goslings, # pair.....	1 50 @	1 75
Pigeons, old, # dozen.....	1 50 @	1 75
Pigeons, young.....	1 50 @	1 75

## BUTTER.

Stocks of fresh have not cleaned up the past week as well as necessary for a healthy market. The insufficient demand is due to considerable trade having been lately diverted to held and packed butter. Concessions to buyers was the rule rather than the exception, especially on other than most select qualities.

Creamery, extras, # lb.....	24 @	—
Creamery, firsts.....	22 1/2 @	23 1/2
Creamery, seconds.....	21 1/2 @	22 1/2
Dairy, select.....	22 1/2 @	—
Dairy, seconds.....	19 @	21
Dairy, soft and weedy.....	— @	—
Mixed store.....	15 @	16
Creamery in tubs.....	20 @	22
Pickled Roll.....	20 @	21
Firkin, California, choice to select.....	20 @	21
Firkin, common to fair.....	17 @	18

## CHEESE.

No special changes have taken place in this market the current week. Dealers who have to buy quote firm figures, while those who are well stocked report a weak tone. As a matter of fact, values are ruling steady, but business at full current rates is mostly of a jobbing character.

California, fancy flat, new.....	10 @	—
California, good to choice.....	9 @	9 1/2
California, fair to good.....	8 1/2 @	9
California Cheddar.....	— @	—
California, "Young Americas".....	9 1/2 @	11

## EGGS.

Market continues to be lightly stocked with strictly select fresh, and some favorite marks are commanding in a small way from special custom 10c. above quotable values. For off qualities of fresh the market is weak, such being neglected by most buyers, Eastern and cold storage being taken instead. Latter kinds are in liberal supply.

California, select, large, white and fresh.....	25 @	26
California, select, irregular color & size.....	22 @	24
California, good to choice store.....	16 @	19
Eastern, as to section and grading.....	15 1/2 @	20
Eastern, cold storage.....	— @	—

## VEGETABLES.

Most varieties in season were in ample receipt for immediate requirements. There was more difference than ordinarily experienced in qualities of several kinds, notably in String Beans and Tomatoes, and prices in consequence showed correspondingly wider range. Onions were in fair request, but supplies proved liberal and values did not show material improvement over figures last quoted.

Beans, String, # lb.....	2 1/2 @	4
Beans, Wax, # lb.....	2 1/2 @	3 1/2
Beans, Lima, # lb.....	3 1/2 @	5
Cabbage, choice garden, # 100 lbs.....	1 00 @	1 25
Cauliflower, # dozen.....	50 @	—
Cucumbers, Bay, # box.....	25 @	40
Egg Plant, # box.....	50 @	75
Garlic, # lb.....	2 1/2 @	3
Green Corn, # sack.....	75 @	1 25
Green Corn, Alameda, # crate.....	1 25 @	1 50
Onions, Yellow Danver, # cental.....	50 @	65
Okra, Green, # box.....	40 @	60
Peas, Sweet, garden, # lb.....	3 @	4
Peppers, Green Chile, # box.....	40 @	65
Peppers, Bell, # lb.....	40 @	65
Pickle Cucumbers, No. 1, # box.....	50 @	75
Pickle Cucumbers, No. 2, # box.....	40 @	60
Squash, Summer, # large box.....	35 @	50
Tomatoes, River, # large box.....	25 @	50

## POTATOES.

Other than fancy qualities were in abundant supply for the immediate demand, which was not particularly brisk, either for shipment or on local account. For some very select Burbanks, smooth and bright, and of uniform and desirable size, slightly higher figures than quoted were realized. Sweet potatoes were in increased supply, both from Sacramento river section and Merced, causing prices to decline, with market weak at the reduced figures.

Burbanks, River, # cental.....	40 @	60
Burbanks, Salinas, # cental.....	70 @	1 00
Sweet Potatoes, Yellow, # cental.....	1 00 @	1 75

## The Fruit Market.

## FRESH FRUITS.

While there have been no pronounced changes in the market for fresh fruits, either in general conditions or in quotable rates, from that of preceding week, there was a moderately firm tone for most descriptions, and especially for Peaches and Pears of high grade, desirable for canning or shipment. For Bartlett Pears which were practically perfect and of large size, extreme quotations were readily realized, and in some instances still higher prices. Choice to select Peaches, both clings and freestones, were in active request, and, where exceptionally fine, sold above quotations. The Apple market was firm for best qualities at figures quoted, such being in rather light supply, but there was no scarcity of common stock, which moved slowly and at generally low figures. Plum market failed to develop any noteworthy firmness, although there were no especially heavy offerings of what could be justly termed superior qualities. Fig market tended against buyers, but demand for them was not brisk at full current rates. In the Grape market the inquiry for table fruit was largely for Seedless and Isabella, these commanding the best figures. Although Wine Grapes were rather firmly held, the demand for them in this center was not active at the prices asked. Tendency on Berries of nearly all seasonable kinds was to decreased supplies, but prices remained without appreciable improvement. Melons were in about as great favor as preceding week, but were in greater supply and lower.

Apples, fancy, 4-tier box.....	1 00 @	1 25
Apples, good to choice, # 50-lb box.....	60 @	90
Apples, common to fair, # 50-lb box.....	25 @	50
Apples, Crab, # box.....	30 @	60
Blackberries, # chest.....	3 50 @	6 00
Cantaloupes, # crate.....	75 @	1 25
Figs, # 1-layer box.....	35 @	60
Figs, # 2-layer box.....	50 @	85
Grapes, Tokay, # box.....	40 @	65
Grapes, Seedless Sultanina, # crate.....	75 @	1 00
Grapes, Isabella, # crate.....	65 @	1 00
Grapes, Fontainebleau, # crate.....	40 @	60
Grapes, Rose of Peru, # box.....	35 @	50
Grapes, Black Hamburg, # box.....	35 @	50
Grapes, Zinfandel, per ton.....	21 00 @	24 00
Grapes, Muscat, # box.....	35 @	60
Raspberries, # chest.....	5 00 @	8 00
Nectarines, Red, # box.....	60 @	75
Nectarines, White, # box.....	40 @	65
Nutmeg Melons, # crate.....	30 @	60
Plums, ordinary varieties, # box.....	20 @	35
Plums, fancy, # box.....	50 @	60
Prunes, # crate.....	30 @	50
Plums, as to size, # ton.....	7 00 @	15 00
Peaches, # box.....	35 @	60
Peaches, wrapped, # box.....	65 @	80
Peaches, Cling, # ton.....	15 00 @	25 00
Peaches, Freestone, # ton.....	15 00 @	25 00
Pears, Bartlett, # box.....	40 @	1 00
Pears, Bartlett, # ton.....	12 50 @	25 00
Pears, common kinds, # box.....	25 @	65
Pomegranates, # box.....	75 @	1 00
Strawberries, Longworth, # chest.....	5 00 @	8 60
Strawberries, Large, # chest.....	3 00 @	6 00
Whortleberries, # lb.....	4 @	6
Watermelons, # 100.....	7 00 @	18 00

## FRIED FRUITS.

The market for cured and evaporated fruits shows less activity than for several weeks preceding, which is readily accounted for, and is not necessarily indicative of any change for the worse. The leading local dealers had been buying very heavily of both Apricots and Peaches, and were especially active in search of choice to select qualities. As is nearly always the case under such circumstances, dealers found it necessary to make a halt, to catch breath, as it were, to make a survey of their purchases and find out just exactly where they were at. While the market is quiet, it is not quotably lower. In the case of Apricots, no fears need be entertained of any appreciable slump in prices. Some dealers predict an easier market for Peaches, claiming that the East will not take hold to any great extent at current rates. Any weakness which may be developed in Peaches will most likely be confined to low grade stock, as choice to select have not shown up thus far in heavy quantity and are not likely to during the balance of the season. Most of the business up to date with the East has been in straight carloads. The large majority of Eastern handlers of California fruits, however, take only assorted cars, and this demand remains to be filled, which is almost certain to call for active service in the way of deliveries during the next 60 or 90 days. As soon as stocks in the hands of wholesale dealers show noteworthy reduction, they may be calculated on to be again active purchasers. Not much has yet been done in Pears, but that there will be any excessive stocks of choice to select is not probable. Pitted Plums thus far received show very good average quality, and prospects are that the output will be of fairly liberal volume; at present no changes in quotable values are warranted. Fig mar-

ket is decidedly firm, owing to the Government having ruled against the importation of Smyrna figs until 60 days after official notice of the disappearance of the plague in Smyrna. New York dealers wire here this week, in response to inquiries, that they were endeavoring to have the ruling revoked. Those interested in the welfare of the State, and especially those who are in the fig industry, should take action to prevent New York importers having the order repealed. New Prunes are on market, but the new prices have yet to come; they are promised immediately.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	6 1/2 @	7
Apricots, Royal, choice, in sacks, # lb.....	7 @	7 1/2
Apricots, Royal, fancy.....	9 @	—
Apricots, Moorpark.....	10 @	12 1/2
Apples, in 50-lb boxes, rings, pressed, fancy.....	5 1/2 @	5 1/2
Apples, 50-lb boxes, rings, pressed, good to choice.....	4 @	4 1/2
Figs, White, fancy pressed.....	6 @	7
Nectarines, # lb.....	5 @	6
Peaches, unpeeled, fancy.....	6 1/2 @	7 1/2
Peaches, unpeeled, choice.....	5 1/2 @	6
Peaches, peeled, in boxes.....	12 @	15
Pears, unpeeled Bartletts, halved, fancy.....	7 1/2 @	8
Pears, halved, unpeeled Bartletts.....	5 1/2 @	6 1/2
Pears, quartered, unpeeled Bartletts.....	5 @	6
Plums, Black, pitted.....	5 1/2 @	6 1/2
Plums, White and Red.....	6 1/2 @	7 1/2
Prunes in boxes, 1/2c higher for 25-lb boxes, 1/2c higher for 50-lb boxes.....	4 1/2 @	6

## COMMON SUN-DRIED.

Apples, sliced.....	3 @	3 1/2
Apples, quartered.....	3 1/2 @	4 1/2
Figs, Black.....	2 @	3
Figs, White.....	3 @	3 1/2
Peaches, unpeeled.....	4 1/2 @	5

Advices by recent mail from New York City furnish the following review of the dried fruit market:

The situation has remained very much the same this week. Spot evaporated apples have had a light inquiry and former prices have prevailed. Not much interest in futures this week, but tone steady; the few sales reported have been at 4 1/2 @ 4 3/4 c. for October and November delivery and 4 3/4 @ 4 1/2 c. for December delivery; sellers inclined to be firm on this basis. Sun-dried apples have continued very dull and weak, and there has been little movement in chops or waste, though latter held steadily when showing attractive quality, in instances above quotations. Raspberries rather firm, choice Northern having advanced to 16c., and in this State makers are asking even higher figures, though some Southern here have sold at 15c. and sun-dried quoted nominally at 14 @ 15c. Huckleberries held firmly, and also cherries; supply of both light. Further sales of blackberries reported at 5 1/2 c. and tone quite firm. California apricots have advanced further on the coast and market is very strong here, with holders not inclined to urge sales at present figures. Peaches have ruled rather quiet and also prunes.

Apricots, Cal., 1900, # lb.....	7 1/2 @	8 1/2
Peaches, Cal., unpeeled, in bxs, # lb.....	7 @	8
Peaches, Cal., unpeeled, in bags, # lb.....	6 @	7 1/2
Prunes, Cal., # lb.....	4 1/2 @	6 1/2

## RAISINS.

Market is almost bare of stocks, and there is nothing at the moment upon which to base quotations. All of the Association's stock has been closed out, about sixty carloads being represented in the final transfer, and were taken by Fresno parties to be seeded. New Raisins are expected to appear in limited quantity at an early day.

## CITRUS FRUITS.

Lemons are moving in a moderate way at quotably unchanged rates, with supplies ample for current requirements, and for other than choice to select the market lacks firmness. Limes were quite steadily held, with spot supplies of small compass. Oranges are practically out of stock and no longer quotable.

Lemons—California, select, # box.....	3 50 @	—
California, good to choice.....	2 50 @	3 00
California common to fair.....	1 50 @	2 00
Limes—Mexican, # box.....	6 00 @	6 50
California, small box.....	— @	—

## NUTS.

Almond market remains strong, with the entire crop practically sold, and more contracted for in some instances than can be delivered. New Walnuts have not yet put in an appearance; the crop is not only late, but promises to average poorer quality than was generally anticipated.

California Almonds, shelled.....	22 1/2 @	25
California Almonds, paper shell, # lb.....	12 1/2 @	13 1/2
California Almonds, soft shell.....	10 @	11
California Almonds, hard shell.....	6 @	7
Walnuts, White, soft shell.....	— @	—
Walnuts, White, California, standard.....	— @	—
Chestnuts, California Italian.....	— @	—
Peanuts, California, fair to prime.....	5 @	6
Peanuts, Eastern, hand-picked.....	6 @	6 1/2
Pine Nuts.....	5 @	6

## WINE.

No prices on this year's wine have yet been announced, and it looks as though there would not be much to market from

producers' hands, owing to the free purchase of wine grapes by dealers. The wine grape market continues firm, with a tolerably wide range in prices for dry wine grapes, which are quotable from \$17 @ 23 per ton, as to district, quality, quantity and other conditions. In the northern part of the State sales are mostly at \$20 @ 23, the latter figure being reported current in Napa section. Bids in Sonoma over \$21 are said to be the exception. Shipments from this port by sea in July were 382,930 gallons and 554 cases, value \$119,137. This is more than double the quantity shipped from here by sea in corresponding month last year.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.		Since July 1, '00.	Same time last year.
Flour, 1/2 sacks.....	116,199	865,077	892,625
Wheat, centals.....	38,645	841,769	684,757
Barley, centals.....	267,419	1,023,188	1,346,361
Oats, centals.....	21,480	167,383	114,239
Corn, centals.....	600	9,007	21,165
Rye, centals.....	2,140	11,065	29,354
Beans, sacks.....	1,697	20,439	31,675
Potatoes, sacks.....	36,706	207,843	144,811
Onions, sacks.....	4,013	29,744	36,139
Hay, tons.....	5,397	37,366	31,693
Wool, hales.....	1,873	5,772	13,444
Hops, hales.....	2	291	692

## EXPORTS BY SEA.

FOR THE WEEK.		Since July 1, '00.	Same time last year.
Flour, 1/2 sacks.....	41,444	433,972	491,163
Wheat, centals.....	11,300	786,290	510,747
Barley, centals.....	134,739	524,399	1,009,926
Oats, centals.....	9	22,598	6,707
Corn, centals.....	—	—	2,982
Beans, sacks.....	855	3,697	3,458
Hay, hales.....	1,000	2,417	14,062
Wool, pounds.....	—	233,621	28,006
Hops, pounds.....	—	9,560	14,565
Honey, cases.....	—	188	1,118
Potatoes, packages.....	2,507	6,301	9,324

## California Dried Fruit at New York.

NEW YORK, Aug. 29. — Evaporated apples, common, 3 1/2 @ 4 1/2 c; prime wire tray, 4 1/2 @ 5 1/2 c; choice, 5 1/2 @ 6 c; fancy, 6 1/2 @ 7 c. California dried fruits.—Market firm for Apricots, steady for Peaches, quiet for Prunes.

Prunes, 3 1/2 @ 7 c.

Apricots, Royal, 11 @ 14 c; Moorpark, 15 @ 17 c.

Peaches, unpeeled, 6 @ 9 c; peeled, 14 @ 18 c.

## Deafness Cannot Be Cured

hy local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube is inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed, Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that can not be cured by Hall's Catarrh Cure. Send for circulars, free.

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# GLENN RANCH,

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This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

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Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.



## Leg and Body Wash.



Race horses often become sore and stiff from continued strain on the hard tracks. Nothing takes out this stiffness and soreness like a wash compounded of diluted

### Tuttle's Elixir

apply to the legs and put on light bandages. Sponge the body and put on light blanket. Guaranteed to produce desired results or money back.

Readville Trotting Park, Mass., March 23, 1900.  
Dr. S. A. Tuttle, V. S.  
Dear Sir:—I have used your Elixir for the past ten years, in the diluted form for a leg and body wash. I consider it the best wash for keeping horses from soiling up. Horses done up with this wash are much less liable to take cold than when done up with witch hazel or any other wash I ever used.  
J. H. NAY.  
Our 100-page book, "Veterinary Experience," FREE.  
Tuttle's Elixir Co., 437 O'Farrell St., San Francisco, Cal.  
Beware of so-called Elixirs—none genuine but Tuttle's.  
Avoid all blisters; they offer only temporary relief if any.

## HORTICULTURE.

### Fertilizers for California Fruits.

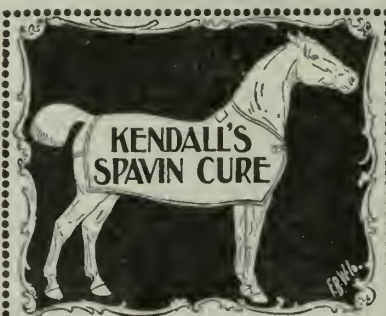
TO THE EDITOR:—It is a common belief among those who settle in nearly all new countries that the soil is so fertile that it will not require manuring as long as they live, if ever. That the fruit growers of the Pacific coast should have thought so is not strange, for the soils of that region are quite peculiar in some respects. They are largely made from the disintegration of rocks which are rich in potash and phosphoric acid, but the supply of nitrogen is not so plentiful as it is in the greater part of the soils of the Mississippi valley. It is, perhaps, well understood by some of the fruit growers of California and other far Western States just what their crops need in the way of fertility in the soil, but there may be others who do not understand it as clearly as they might. It pays us to learn all we can about our business, and if there is any one thing we fruit growers need to be better posted about than soil fertility I do not know what it is. It lies at the foundation of the whole science of fruit growing. No matter what the climate for the reasons may be, if the elements of fertility are not in the soil in sufficient abundance the cannot grow as they should. The three elements of fertility which, above all others, are required to grow a good crop of fruit, or of anything else, for that matter, are those already referred to, nitrogen, phosphoric acid and potash.

Nitrogen is, perhaps, the least needed of the three by the fruit grower, because it stimulates a tender, leafy, woody growth, which is often one of the objections to be met in fruit growing. I do not mean that a reasonable amount of this kind of growth is not needed, but there may easily be too much of it, which makes severe pruning necessary, with a consequent renewal of the branches and a deficiency of fruit. This is sometimes very noticeable, and whenever it is so there is too much nitrogen in the soil. Nature may have put too much there, it may have been applied in manures of some kind, or it may have come from the growing of some crop which has gathered nitrogen from the air and stored it in the ground. Where alfalfa has been grown for a number of years there is apt to be an excess of nitrogen, because it is one of those wonderful plants which take in the free nitrogen of the air and retain it in their roots and stems. Such a sod, when rotted, will make almost anything grow luxuriantly, if there is abundant water, either from rains or irrigation. Trees will grow, under such conditions, with great vigor, and sometimes too luxuriantly for their ultimate good. A crop or two of hay or some such thing would be better for the first few years, and afterwards the trees might be set. An excess of nitrogen may make the fruit larger in some cases, but it will be later in ripening and of poorer quality than if there had been less of this wonderful stimulant. One of the cheapest sources of nitrogen for the farm is nitrate of soda. This is found on the west coast of South America, and it is therefore more cheaply transported to California than elsewhere in the United States. It is fortunately so for the agriculture and horticulture of the Pacific coast, where nitrogen is naturally rather scarce in the soil. This one thing should always be remembered about nitrate of soda and

nearly all other nitrogenous fertilizers: that they are the most volatile of all and act quickly, therefore they should be applied during the growing season, when they will be taken up at once by the plants. Otherwise there will be loss of fertility.

Phosphoric acid is an element of fertility which the fruit grower should have in his soil in abundance, and the grain grower as well. It enters largely into the composition of seeds and grains. It helps to give vigor to the whole constitution of the tree or plant. Most soils of the Pacific slope, as has been said, naturally have liberal supplies of phosphoric acid. But they may become depleted by continued cropping. In such cases the most available supply is in the bones of animals, because they always have a considerable proportion of it in them. This is the reason why ground bone and dissolved phosphate rock are used as manures, the phosphate beds of South Carolina, Florida, Tennessee, etc., being partly the residue of the bones of prehistoric animals. Potash is the one substance which seems of more importance than any other to the fruit grower. All the elements of fertility are necessary, which include all those mentioned and a few more, but potash has a most wonderful effect in the orchard, vineyard, etc. It gives all sorts of crops thrifty, healthy growth, but fruits are especially benefited. It is potash that gives bright color and high flavor to them. No doubt this is one of the main reasons for the beautiful coloring and richness of many kinds of fruits grown on the virgin soils of California and other Pacific States. The large percentage of potash in them is peculiarly suitable to the growing of fruits. But time will tell even on these great resources. Crop after crop will take up the available fertility until it becomes necessary to return a part of what has been taken from it. There is no form in which potash may be procured so cheaply as in muriate of potash, as it is commercially known. Sulphate of potash is better for oranges, as it produces a finer quality. If potash be applied to orchards and vineyards when they begin to fail, there will be a most remarkable change for the better. It has already been tried with very beneficial results. Whatever manuring the fruit grower does, he should not forget potash.

H. E. VAN DEMAN,  
Formerly Pomologist U. S. Department of Agriculture.



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Fingal, Barnes Co., N. D., March 19, 1898.  
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It is an absolutely reliable remedy for Spavins, Splints, Turbs, Ringbones, etc. Removes the bunch and leaves no scar. Price, \$1; six for \$5. As a liniment for family use it has no equal. Ask your druggist for KENDALL'S SPAIN CURE, also "A Treatise on the Horse," the book free, or address  
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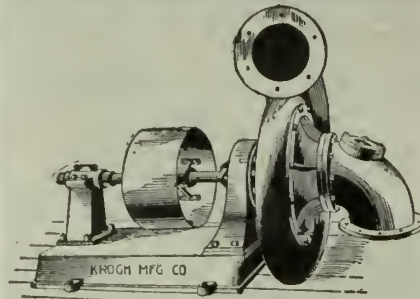
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The expense of feeding a profitable cow is no more than the cost of feeding an unprofitable one.

It costs comparatively nothing to find out whether each member of the herd is profitable. The

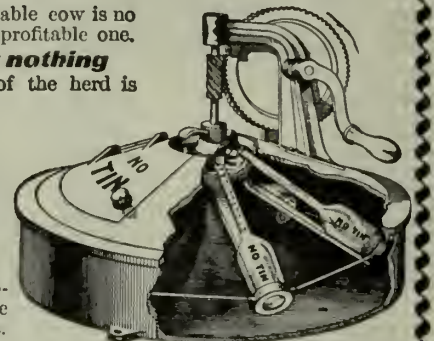
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### Babcock Tester

will give exact information. Is substantially built of cast iron, and made to use the ordinary Babcock bottles.

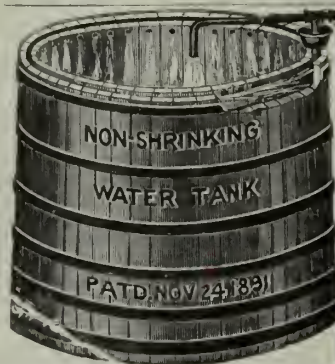
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## THE IRRIGATOR.

### Survey Work in the San Joaquin.

F. H. Newell of the United States Geological Survey, arrived in Fresno last week on his return from a trip to the Kings river basin, to examine into the work of the party of surveyors under his direction. President Booth of the Chamber of Commerce invited him to address a meeting on the subject of the operations of his department.

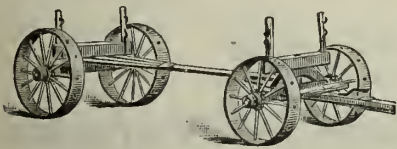
Mr. Newell began by explaining what the work of the Geological Survey, which is twenty-one years old, is. It ascertains, he said, the resources and products of the natural domain of the United States in precise terms. Although originally designed for the West, it now operates in every section of the country, and inspects not only land, but water and forestry conditions. From \$600,000 to \$900,000 a year is spent, and that district, of course, gets the most benefit from it, which makes intelligent use of this opportunity.

Mr. Newell went on to explain that the first work of the bureau is to make good physical maps of the country, showing land altitudes and slopes, water levels and resources, forest growths and so on. The bureau encourages local interest by promising to duplicate any sun which may be appropriated by the State for geological work. Many Eastern States have largely embraced the opportunity, and in this way have received a greater amount of benefit from the movement than has the West. The appropriation of \$10,000 by the last session of the State Legislature was vetoed by the Governor, so the work in California is not now as extensive as it may be in the future.

The local work of mapping the Kings river basin, according to the speaker, will probably be finished by the end of this year. He explained at length the maps that are being made, and said that the bureau contemplates only finding out the physical facts about the land, and in some cases showing what might be done to improve them under ideal conditions, but as to constructive changes or legal conditions, the bureau can have no concern. The community or State must take the facts and use them to its own advantage.

### A Low Wagon at a Low Price.

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Company, Quincy, Ill., have placed upon the market a Farmer's Handy Wagon, that is only 25 inches high, fitted with 24 and 30-inch wheels with 4-inch tire.



This wagon is made of the best material throughout, and really costs but a trifle more than a set of new wheels, and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

July 9, 1900.

DR. S. A. TUTTLE,  
DEAR SIR:—Enclosed find \$2, for which please send me by express six bottles of Elixir. I am having great luck with the Elixir. It has, I think, cured a splint on a horse that has been lame for two years—one of the most obstinate of cases. Also cured a colt that had a very bad sprain of the ankle. I think I can do you some good here, for I can say without reserve that you have one of the best remedies I have ever seen.

Yours truly, E. D. GULICK.  
Maple Avenue Driving Park, Elmira, N. Y.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering,  
Surveying, Architecture, Drawing and Assaying.  
933 MARKET STREET,  
SAN FRANCISCO, CAL.

Open All Year. : A. VAN DER NAILLEN, Pres't.  
Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. Established 1864. Send for Circular.

### Dietary Value of Dark and White Meats.

The idea has generally prevailed that white meats are more suitable for the sick owing to greater digestibility and the presence of less uric acid and nitrogenous extractives. This belief has been shaken by recent medical experiments, which show that while white meats, such as poultry and fish, do in certain cases, contain less extractives and nitrogenous derivatives, the average amount does not so differ in dark and white meats, such as poultry, veal, beef, pork, mutton, etc., to make either preferable. It is pointed out that the only way of limiting the ingestion of these deleterious extractive and nitrogenous substances is by diminishing the amount of meat taken, rather than by forbidding dark meats.

RECENTLY Carroll D. Wright, Commissioner of Labor, has been investigating the relative conditions of making plows now and fifty years ago. He finds that fifty-two men are now employed in the making of a single plow, against two half a century ago. The different operations now are ninety-seven in number, as against eleven then. Taking ten plows as the unit of computation, he finds that the two workmen of that day took 1180 hours to make them, while the fifty-two men of to-day take but 37½ hours. While the labor cost of ten plows was \$54.46 in 1850 and is but \$7 now, the wages paid have risen from 60 cents a day to a range of from \$1.25 to \$1.60. It furnished another demonstration of the truth of Schoenhof's economic paradox that "high-priced labor gives a low-priced product."

THE continual breaking of lamp-chimneys costs a good deal in the course of a year.

Get Macbeth's "pearl top" or "pearl glass." You will have no more trouble with breaking from heat. You will have clear glass instead of misty; fine instead of rough; right shape instead of wrong; and uniform, one the same as another.

Our "Index" describes all lamps and their proper chimneys. With it you can always order the right size and shape of chimney for any lamp. We mail it FREE to any one who writes for it.  
Address MACBETH, Pittsburgh, Pa.

## PRODUCTIVE FARM LAND.

### For Sale in Tracts to Suit.

Come and see the crops growing on the Rancho Santa Clara del Norte. Now is the time. A large ditch runs through the property, guaranteeing ample water rights to irrigate every acre of land.

Farmers and orchardists seeking good productive land for all kinds of crops—Beans, Beets, Alfalfa, Corn, Barley, Walnuts, Apricots and Lemons—will do well to look into this proposition before investing elsewhere.

The climatic conditions are as near perfect as possible. For full information, apply to GEO. C. POWER, Agent. Office—Palace Building, 152 Main St., Ventura, California.

## A FINE RANCH,

### UNEXCELLED FOR DAIRYING PURPOSES.

Over 200 acres in alfalfa which can be increased to 500 acres. Ranch located on Bear river, three miles from Wheatland. Will be leased on shares for dairy ranch, as a whole or divided, to one or more parties having dairy herds. Address

PETER M. ROONEY, Horstville, Yuba Co., Cal.

## Prune Dip.

"Greenbank" Powdered Caustic Soda and Pure Potash.

T. W. JACKSON & CO.,  
Sole Agents, - No. 123 California Street,  
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Telephone Main 199.  
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DEALERS IN PAPER,  
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BLAKE, MOFFITT & TOWNE, Los Angeles.  
BLAKE MCFALL & CO. .... Portland, Or



## Breeders' Directory.

### HORSES AND CATTLE.

**HOLSTEINS**—Winners over Jerseys of EVERY butter contest at State Fairs for last six years. Aged, 4-yr., 3-yr. and 2-yr.-old classes, except 1st on 2-yr.-old in 1895. Last year every butter prize awarded won by my herd, except 2nd for 2-yr.-olds, 21 Jerseys and Durhams competing. F. H. Burke, 626 Market St., S. F.

**1 AYRSHIRE BULL, 2 AYRSHIRE HEIFERS** registered, most fashionable strains; price, \$260 00. 1 Standard-Bred Nutwood Stallion, disposition perfect; price \$250.00. Owner going away. A. W. Canfield, Elmhurst, Cal.

**BULLS**—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times, either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

**PETER SAXE & SON**, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs. Correspondence solicited.

**JERSEYS, HOLSTEINS & DURHAMS.** Bred specially for use in Dalry. Thoroughbred Hogs, Poultry. William Niles & Co., Los Angeles, Cal. Breeders and Exporters. Established 1876.

**J. H. GLIDE**, Sacramento, Cal. Have 70 choice Durham Bulls for sale.

**JERSEYS**—The best A. J. C. C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale

### POULTRY.

**WELLINGTON'S IMPROVED EGG FOOD** for poultry. Every grocer and merchant keeps it.

**SANTA TERESA POULTRY FARM**, Eden Vale, Santa Clara Co., Cal. Illustrated catalogue and guide free. Agents Eclipse Aluminum Leg Bands and Rabbit Labels.

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**P. H. MURPHY**, Perkins, Sac. Co., Cal. Breeder of Shorthorn Cattle and Poland-China Hogs.

**BERKSHIRE, POLAND-CHINA & DUDOC HOGS.** Choice; Thoroughbreds. Wm. Niles & Co., Los Angeles, Cal. Established in 1876.

**J. P. ASHLEY**, Linden, San Joaquin Co., Cal. Breeds Berkshire, Poland-China and Essex Hogs

### SHEEP AND GOATS.

**C. P. BAILEY**, San Jose, Cal. Angora Goats and Persian Fat-tailed Sheep. Catalogue free.

### BREEDERS' SUPPLIES.

**HENTEETH**, Blood Meal, Bone, Chick Feed; circular free, or 4 samples, prices, etc., mailed for 5c postage. Poultry, Pigeon and Belgian Hare Supplies, Incubators, etc. Croley, 506 Sac'to St., S. F.

## THE LYNWOOD HERD OF SWINE

has been pretty well cleaned out of salable pigs and we have but a few young litters on hand. Our stock is now being put into show condition and we cordially invite every visitor to the State Fair to call at our pens and see the kind of stock we keep. It has always been one of the sights of the Fair and we hope to improve on former exhibits.

In answer to inquiries we will describe any stock we think will suit you.

**SESSIONS & CO.**, 117 E. 23rd St., Los Angeles, Cal.

## PASTEUR VACCINE

is the original and successful preventive remedy for

## ANTHRAX.

Write for particulars, official endorsements and testimonials from stock raisers who have successfully used PASTEUR ANTHRAX VACCINE in the United States since 1895 and protected their stock against Anthrax.

### PASTEUR VACCINE CO.,

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### "HATCH" Pruning Saw.

The Best in Use!

Emery Wheels, Grindstones, Files, Saws, Machine Knives, Etc. Steel. Tel. Main 5052. 17-19 Fremont Street, San Francisco, Cal.

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## LIVE OAK STOCK FARM,

Six Miles N. W. from PETALUMA, on the Petaluma and Sebastopol Road.

**FRANK A. MECHAM, Prop.**

Importer and Breeder of

## Red Polled Cattle.

Color Deep Red. Both Sexes for Sale.

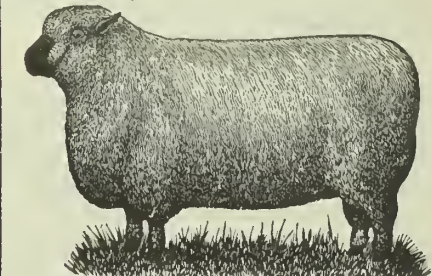
Address all communications PETALUMA, SONOMA CO., CAL.



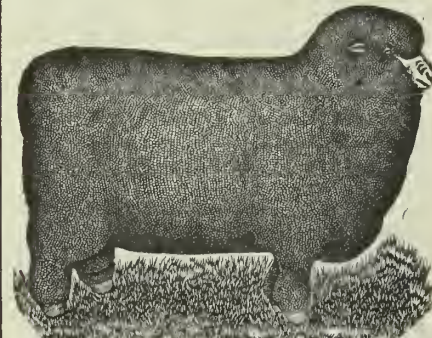
### FRANK A. MECHAM.

Importer and Breeder of Shropshire Sheep.

They were all imported from England, or bred direct from imported stock.



We have also bred American Merinos—Hornless Sheep—for 30 years. They are a large sheep, without wrinkles. Rams will produce 20 to 25 pounds of long, white wool yearly. Sheep of both sexes for sale.



**FRANK A. MECHAM**, Importer and Breeder.

Shipping Points: PETALUMA AND SANTA ROSA, SONOMA CO., CAL.

### LEE D. CRAIG,

Notary Public and Commissioner of Deeds,

316 MONTGOMERY STREET,

Bet. California and Pine, SAN FRANCISCO, CAL.



## State Fair Notes.

The show of Percheron horses at the State Fair this year promises to be a great sight. A gentleman from Alameda county will show a two-year-old stallion which weighs 2100 pounds, and a Fresno party will exhibit a full line of imported Percherons, including a mare which was a famous prize-winner in Paris before importation to this country.

The exhibit of hogs will be the largest ever shown on the fair grounds, and the merit and class of the animals will be superior. Lindgren & Sons, of Fresno will show a drove of Poland-Chinas, headed by a son of Chief Tecumseh II, the most famous boar of his breed. A San Joaquin county breeder will show Poland-Chinas, of the Chief Tecumseh II, Black U. S., and Corwin strains. Sessions & Co., of Los Angeles, will make a great exhibit of Poland-Chinas, purchased by them from the leading Eastern droves, and will show a drove of Berkshires headed by a boar purchased by William C. Vanderbilt in England, and purchased from him by Mr. Sessions. Included in his drove will be animals procured from the famous Gentry drove in the East. Essex pigs in every variety will be exhibited by breeders from Alameda, San Joaquin and Sacramento counties. The contests in these classes will be close, and persons interested in fine hogs will find the State Fair the most interesting place to visit.

The State Fair people will hold a great dog show. An expert judge has been employed in the East to judge the dogs, and the finest and fanciest animals on the coast will be entered. Four hundred are expected, representing all breeds, from the toy spaniel to the majestic mastiff and St. Bernard. Mrs. Hearst's Verona kennels will be represented by four of the finest collie dogs in the world. The famous St. Bernard dog, Grand Master, Jr., will be on exhibition, and an Eastern handler is expected to bring out a string of famous prize-winners, which he now has collected at Guttenburg, N. J.

The cattle show will be worth going a great ways to see. Among the Jerseys, imported animals and animals purchased in the Eastern States from the most famous herds, will be on exhibition, and Holstein cattle recently imported from Holland and purchased in New York. A herd of Shorthorns from

Sonoma county, and another famous herd from Nevada, will be at the fair, and three of the greatest herds of Herefords which ever met in competition will line up at Sacramento. These Herefords are sensational animals, representing the highest breeding to be had in the world. Armour Rose, a two-year-old cow which sold for \$2500 at auction, and two sons of Dalc, the champion Hereford bull of the world, which cost \$1200 apiece as calves, will be shown by a Nevada breeder. James Whittaker, of Galt, will show a bull sired by a son of Beau Real, the champion bull of the West, and out of a daughter of The Grove III, the most famous Hereford bull ever bred in America. In the herd with this bull will be females representing the Lord Wilton, The Grove III, Anxiety and other famous families.

The Belgian hare show promises to be a great exhibition, and to attract breeders and fanciers. All of the Belgian hare clubs will send representatives to Sacramento, and a congress of these associations will be held there for the purpose of promoting harmonious action and improving the standard of animals, and of furthering the interests of this industry generally. Hares will be shown in large numbers from Los Angeles, Santa Clara, Fresno, Alameda, San Francisco and Sacramento. The Sacramento club will procure a large number of hares and have them cooked according to the most approved methods, and served to visitors to demonstrate the merits of these animals as a food product. Professor Weyman will, during the fair, give lectures on cooking, and will make a specialty, during the hare show, of recipes for preparing Belgian hare meat.

monstrate the merits of these animals as a food product. Professor Weyman will, during the fair, give lectures on cooking, and will make a specialty, during the hare show, of recipes for preparing Belgian hare meat.



**Elgin Watches**  
possess accuracy and endurance under all conditions and in all degrees of temperature.  
**Full Ruby Jeweled.**  
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An Elgin Watch always has the word "Elgin" engraved on the works—fully guaranteed.  
Send for free booklet.  
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## Pacific Steel Handy Wagon.

WHEELS.....28 and 34 inches high.  
TIRES.....4 and 5 in. wide, 1/4 in. thick.  
AXLES.....1 1/2 inch, solid steel.  
BOLSTERS AND AXLE STOCKS...White oak.  
CAPACITY.....Guaranteed 5000 lbs.

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## AERATOR.

REMOVES OBJECTIONABLE ANIMAL AND FEED ODORS.

Write us stating number of cows milked.  
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## MONEY IN HONEY!

THE WEEKLY  
AMERICAN BEE JOURNAL  
Tells all about it.  
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# GREAT STATE FAIR OF 1900

AT SACRAMENTO, CAL.

TWO WEEKS---September 3d to 15th.

## GREATEST RACE MEETING IN THE STATE.

TWO WEEKS of Running, Trotting and Pacing. Famous Horses Will Participate.

Fancy Cattle, Horses, Swine and Sheep.

The Pick of the World. Come and see the highest types of animal life.

Great Poultry Show. All Standard and Fancy Breeds.

A Dog Show. All Breeds—Useful, Novel, Ornamental.

Belgian Hares. A great display of English and American stock.

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A POLO TOURNAMENT, GRAND BAND CONCERTS DAY AND EVENING, MEETING OF STATE DAIRY CONVENTION, CREAMERY DISPLAY, AN ART DEPARTMENT, SPECIAL AMUSEMENT FEATURES FOR EVERY DAY AND EVENING, JUDGING DONE BY EXPERTS—PROFESSORS FROM UNIVERSITIES OF OREGON AND CALIFORNIA.

Come for Entertainment in Endless Variety. Come for Instruction and Profit.

SEE THE BEST THAT CALIFORNIA CAN BREED, AND GROW, AND MAKE.

KNOW YOUR STATE AND IMITATE HER HIGHEST IDEALS.

Exhibits Carried Free. : : : Excursion Rates for Visitors.

FOR FURTHER PARTICULARS AND PREMIUM LIST, APPLY TO

PETER J. SHIELDS, Secretary.

A. B. SPRECKELS, President.



## List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
PIONEER PATENT SOLICITORS  
FOR PACIFIC COAST.

FOR THE WEEK ENDING AUG. 14, 1900.

656,080.—PAINTING MACHINE—B. W. Augustine, Alameda, Cal.  
655,921.—LOCK—P. V. Cornils, S. F.  
655,924.—WEED CUTTER—J. G. Evans, Waitsburg, Wash.  
655,859.—HARROW—J. F. Fay, Geyserville, Cal.  
656,104.—MOTOR REGULATOR—J. D. Fricot, S. F.  
655,864.—SELF-LIGHTING CIGAR—B. Heimann, S. F.  
655,777.—ELECTRIC SIGN—A. Heiny, S. F.  
655,868.—CUTTING METAL SHAVINGS—A. Holtgen, S. F.  
656,118.—GAS LIGHTER—Jones & Barrett, S. F.  
656,124.—DENTAL Mallet—U. G. Kinnison, Aberdeen, Wash.  
655,793.—QUARTZ MILL—A. T. McMurtrey, Medford, Ogn.  
655,906.—CLUTCH—J. A. Moore, Paauhau, Hawaii.  
656,038.—EYE SHADE—H. E. Newton, Los Angeles, Cal.  
655,888.—FLUSHING WASTE PIPES—W. T. O'Neil, Etna, Cal.  
655,916.—TELEPHONE SYSTEM—W. Torst Jr., Los Angeles, Cal.  
656,147.—AIR COMPRESSOR—J. W. Van Brocklin, Seattle, Wash.  
655,842.—PREPAYMENT METER—F. Weegmann, S. F.  
656,131.—ADVERTISING DEVICE—P. E. White, Los Angeles, Cal.  
656,071.—R. R. RAIL JOINT—C. Whitmore, S. F.  
655,747.—VACUUM APPARATUS—G. W. Winckfield, Alameda, Cal.  
33,077.—DESIGN—U. E. Lemon, Fairfield, Wash.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey, Strong & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

**SELF LIGHTING CIGARS.**—No. 655,864. Aug. 14, 1900. B. Heimann, San Francisco, Cal. One-half assigned to I. Dannenbaum, same place. This invention relates to a cigar carrying upon itself a means for its ignition without the use of matches. It consists of a specially prepared compound of ignitable material mixed into a paste and incorporated with the ends of the rolled leaves of the cigar so as to form an essential part of the structure. The cigar being rolled, this saturated end can at any time be ignited by rubbing it upon a surface prepared for the purpose, and which will through its chemical action upon the compound on the cigar cause the latter to ignite. It is very convenient for windy or difficult situations.

**VINEYARD HARROW.**—No. 655,859. Aug. 14, 1900. J. F. Fay, Geyserville Cal. Assignor one-half to W. S. Vaughan, same place. The object of this invention is to provide a harrow which is especially designed to be used in vineyards. For such purposes it is necessary that the side frames of the harrow carrying the teeth should be adjustable to stand at different angles with relation to the central support, and the ground over which they travel. For this purpose the harrow is constructed with a central longitudinal beam with draft attachments and two or more parallel toothed beams are located upon each side of the draft beam, and diverge from front to rear with relation to this beam. They are rigidly secured by angle plates at the front and transverse uniting plates at the rear. Loose link connections between the front and rear ends of these toothed beams and the draft bar allow them to tilt to suit the surface of the ground, and a lever fulcrumed at the rear of the draft bar is connected through transverse levers so as to raise and lower the tooth beams to stand at any angle with the draft beams. They can then be locked in any position of adjustment.

It must have been a poor exhibit that could not take a prize at Paris. There were 2827 grand prizes, 8166 gold medals, 12,244 silver medals, 11,615 bronze medals and 7938 honorable mentions—a total of 42,790 awards.



We are the largest manufacturers of Steel Wheels and Truck Wagons in the World. Write for Catalogue. Havana (Ill.) Metal Wheel Co.

## The Fulton Pump.

FOR HAND OR WIND MILL USE.

## SO EASY TO FIX.

The upper and lower Valves are attached to the Pump Rod at all times and can be removed from the Pump by simply removing the rod, leaving the heavy column pipe and Cylinder in the well.

## The FULTON SINGLE ACTING CYLINDERS

for deep wells are made in 25 different sizes and lengths, and are all BRASS or PHOSPHOR BRONZE except the largest sizes. Standard Single Acting Cylinders are guaranteed for 250-foot lift; Special Single Acting Cylinders for 1000-foot lift.



Fine Fulton Cylinders with Removable Valves  
SO EASY TO FIX.

Fine Fulton Cylinders with Removable Valves  
SO EASY TO FIX.

## Kind Words for the FULTON PUMP from the LONE STAR STATE:

SANDERSON, TEXAS, July 21, 1900.  
A. T. AMES, ESQ.,  
Galt, Cal.

DEAR SIR:

Replying to yours of the 11th inst. will say I have a Fulton Deep Well Cylinder in my well here, purchased at your Comstock agency, and to say it gives satisfaction is putting it mild. After trying two other different Cylinders, which was a failure, I put in a Fulton, which does the work to a T. I pump about 400 feet with a wind mill as easy as a hand pump. Many thanks to your genius.

Yours truly,  
CHAS. WILSON.

Manufactured by A. T. AMES,  
GALT, CAL.

## About POTASH

Plenty of Potash must be used to stiffen the stalk, to prevent lodging, and produce plump, full-weight grain—Wheat, Rye or Barley. If the fertilizer is lacking in Potash the crop will be greatly reduced.

Send for free, illustrated books telling all about the use of fertilizers and Potash.

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Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced first-class agency. We have able and trustworthy associates and agents in Washington and the capital cities of the principal nations of the world. In connection with our scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us to give advice which will save inventors the expense of applying for patents upon inventions which are not new. Circulars and advice sent free on receipt of postage. Address DEWEY, STRONG & CO., Patent Agents, 330 Market St., San Francisco, Cal.

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WIND MILLS, GASOLINE ENGINES, PUMPS FOR HAND,  
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TO INTRODUCE OUR

**TRIUMPH STEEL RANGE** into every section of the United States, we will for a short time deliver at your depot free of charge our highest grade Steel range for \$25.00. The regular retail price is \$50.00. It has six 8-inch lids. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21½ inches deep, and 15-gallon reservoir. Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet. Best Range made. WM. G. WILLARD, Manufacturer, 619 N. Fourth St., St. Louis, Mo. Will ship C. O. D. with privilege of examination.



## "HANDY" LOW-WHEELED WAGONS.

We have 'em with STEEL Wheels, 4-inch Tires, and with WOODEN Wheels, 6-inch Tires.

## BEST HEADER TRUCKS Made.

SPECIAL LARGE DISCOUNT OFF LIST. WRITE OR CALL.

ALLISON, NEFF & CO., 222 Mission St., San Francisco.

## California Fruits.

NEW EDITION (3rd)

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Professor Agricultural Practice University of California; Author of "California Vegetables in Garden and Field;" President California State Floral Society; Horticultural Editor Pacific Rural Press of San Francisco.

Large Octavo; 470 Pages; Profusely Illustrated, 12 Full-Page Plates.

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SUGAR PRUNE, BARTLETT  
AND CLIMAX PLUM BUDS

—WRITE TO—  
FANCHER CREEK NURSERY, Fresno, Cal.

SUGAR PRUNE BUDS.  
—AND—  
CLIMAX PLUM BUDS.

Burbank's Latest Kinds.  
SEND FOR PRICES.  
J. T. BOGUE,.....MARYSVILLE, CAL.



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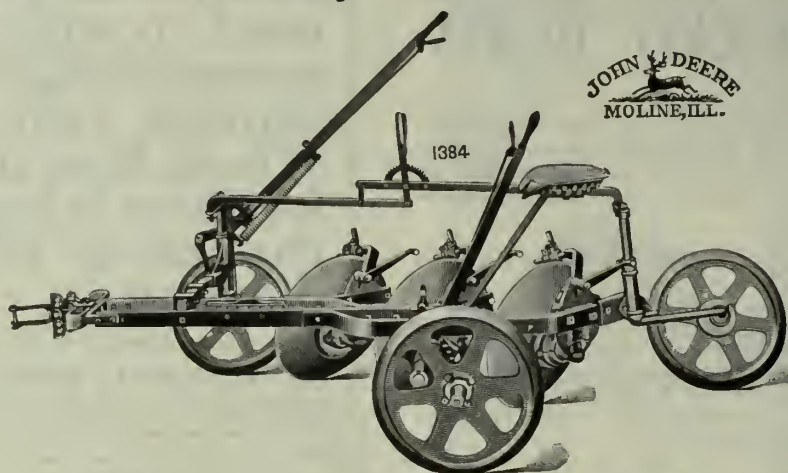
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SIMPLE, SYMMETRICAL AND SUBSTANTIAL.

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EMBODYING THE CORRECT APPLICATION OF CORRECT PRINCIPLES.



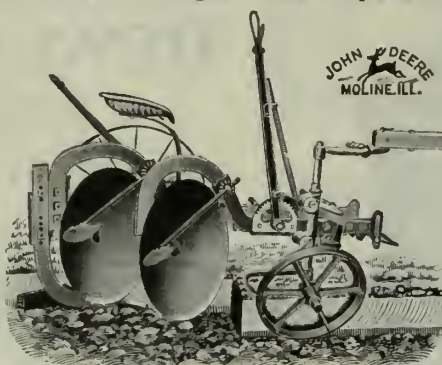
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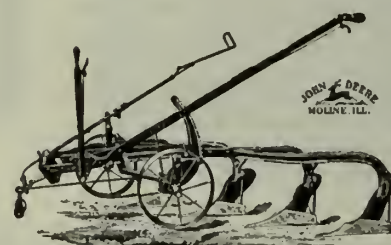
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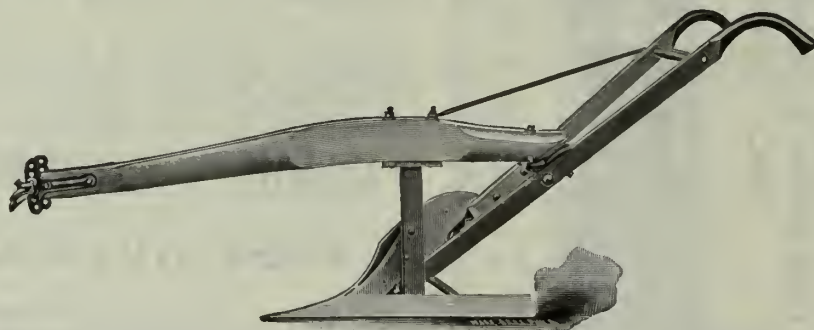
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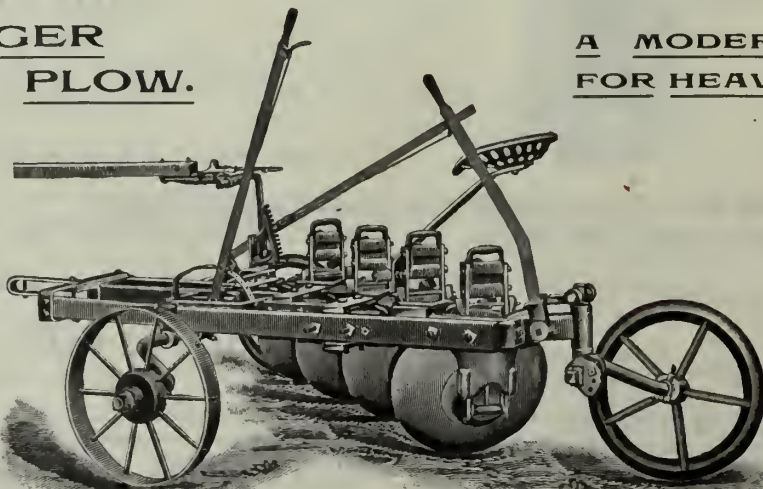
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 10.

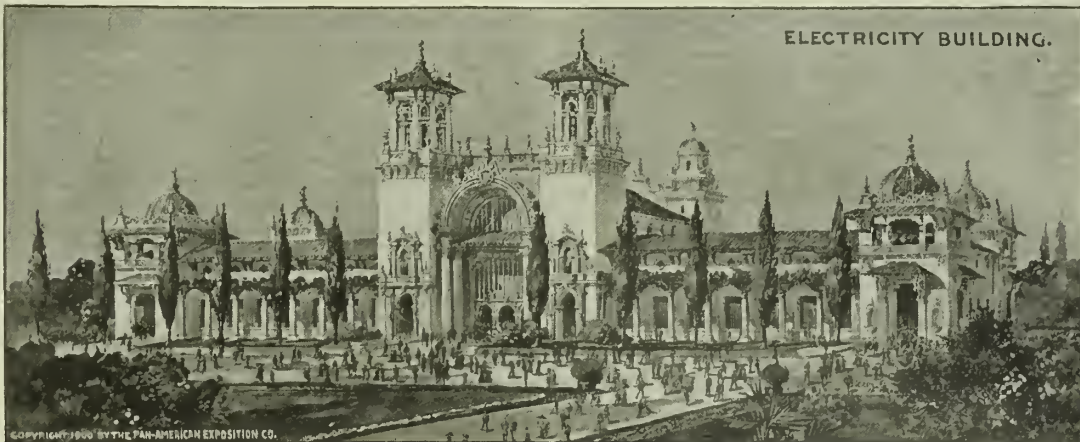
SAN FRANCISCO, SATURDAY, SEPTEMBER 8, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

### A Great Electrical Exposition.

Only very recently could an electrical display be considered as having special agricultural interest. The use of electricity in agriculture is, however, extending very rapidly, and may ere long become a leading agricultural motor. In California, during the last two years, electric pumping for irrigation has become common along the extended power lines which bring the force of the mountain torrents to speed the wheels in the valleys, and no doubt the development of some parts of the State will be greatly accelerated by so desirable a motive power. Electro-horticulture is also a promising line of progress, while electric lighting has long been employed in California dairies during the season of short daylight; and men who formerly labored by the dull glimmer of the lantern now have all the advantage of full illumination. The rural use of the telephone is destroying the traditional isolation of the farmer's life, and in fact nearly all lines of industrial use of electricity touch the farmer at some point in his varied effort and experience.

The Pan-American Exposition at Buffalo next year bids fair to be very rich in electric interests. There is particular reason why it should be. The exposition is but half an hour's ride from Niagara Falls. This great cataract, which has defied the descriptive powers of poets and philosophers, and baffled the delineative skill of painters and photographers, has been put in harness by electric engineers and part of its immense power turned to industrial uses. On the American side there are two great corporations utilizing the current of the Niagara river for devel-



oping electric power used in many industries at the falls. The power thus generated by one of these corporations is also transmitted to Buffalo, 25 miles distant, for use for the electric lighting of the city, for operating a great electric trolley car system and in many important manufacturing establishments. The power thus transmitted will likewise be extensively used for the purpose of the Exposition.

There will be a special building, of which a picture is given herewith, which will contain displays of all kinds in the practical and artistic uses of electricity, together with complete exhibits of electrical machinery and appliances. The designs contemplate a very handsome and commodious building, 500 feet from east to west, and 150 feet wide, giving an exhibition space of 75,000 square feet. A more conspicuous and popular feature of the electricity display at the Pan-American Exposition will be the Electric Tower, which will form a conspicuous center piece of the whole affair.

The height of the Tower, shown in the accompanying picture, is 348 feet above the surface of the broad basin in which it stands. The main body of the Tower is 80 feet square. From the surface of the water to the top of the colonnades is 75 feet. The shaft of the Tower is treated with great simplicity. The center of each side is paneled with fantastically perforated work, through which is indistinctly revealed the massive framework of the Tower. This feature is calculated to produce a remarkable effect when lighted from within, as it is the intention to do. A spiral staircase within the colonnade leads to the stage of the Tower, the cupola, over whose soaring dome is poised the superb figure of Electricity herself, thus dominating the entire Exposition, which owes

so much to her generously exerted power.

From the water to the feet of the figure of Electricity is a vertical distance of 331 feet. The figure is 17 feet in height. The entire exterior of the Tower will be studded with myriads of electric lights, so arranged that a great variety of effects can be secured. The use of electric lights in combination with the sparkling fountains and cascades will produce scenes of fantastic beauty.

### Fruit Displays at Paris.

California pomology continues in evidence at the Paris Exposition through successful displays of citrus fruits. We have a letter of August 30th at Washington from W. A. Taylor, acting pomologist, giving the awards at the temporary competition of August 8th, which include a first prize for our orange and lemon display on that day. In deciduous fruits, California does not make a mark as yet. All the fruits shown up to August 8th were from last year's crop, and were reported to be in good condition when displayed.

The first shipment of fruit of the present season, which contained exhibits of summer apples with a few pears and peaches, from the States of New York and Delaware, is reported to have reached Paris in time for the competition of August 22nd. The apples and pears arrived in good condition. The second shipment went forward from New York on August 29th and contained exhibits of apples and pears from the States of Illinois, New York and Pennsylvania.

The third shipment will leave New York on September 12th, and, according to Washington advices, will contain exhibits from Arkansas, Illinois, Iowa, Kansas, New York and Missouri. The last shipment of the season will leave New York on September 26th and will contain exhibits from a number of States. Thus it appears that California may reach the display through the Department of Agriculture's shipments this month, or it may appear in the later competitions through the collections of the California Commission.

Mr. McADIE, section director of the Weather Bureau in this city, plans to make a very thorough study of the subject of fruit protection from frost in California. He expects to visit most of the chief fruit centers in the State. The authorities at Washington have given him instructions to study the problem this year, particularly with reference to the protection of deciduous fruits. This may mean much to horticulturists, not only in California, but through the whole country, for they are looking to California for instruction and advice as to how to protect their fruits, vegetables and other crops.



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E. J. WICKSON.....Horticultural Editor.

San Francisco, September 8, 1900.

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## The Week.

Showers have come in nearly all parts of the State, but fortunately, thus far, not long nor heavy anywhere. Actual damage has been slight, but indirect injury through slow drying of prunes and raisins is considerable. Producers of these crops are also hampered by scarcity of help, as we expected they would be, and active people who want an outing which would pay its own way, or those who are free from other harvesting, can use their time to advantage in the regions around San Jose and Fresno.

The Prune Association has fixed the rates and the consensus of opinion seems to be that the directors have done the best they could with a difficult situation. Criticism is abundant and it would be strange if every one's interest were best served. The true way to look at the affair as a general proposition is to think of how the large crop of prunes could have been handled at all without organization. That some can perhaps do better outside of the association is itself owing to the fact that the association exists and is at work. We trust that this year's experience will strengthen the organization in every way.

There has been quite free outward movement in grain, wheat, barley and rye all going out of the Golden Gate—the rye and part of the barley to Belgium. Still, shipping wheat has sagged a trifle, for ships are scarce, being largely taken for war supply purposes. The foreign market for wheat is in good shape, but shippers do not get full benefit from it for the reason stated. Chevalier barley for shipping is higher, but low grades of barley are still lower and too much of it in sight. Oats are high and quiet. Corn is firm and but little doing. Of millstuffs, the only change is a better feeling in bran. Hay is steady and arrivals ample, but prices for the best—suitable for export—are keeping up well. Such hay arrives largely under contract. Beef is in good demand. Poor mutton is still lower. Hogs are steady, though arrivals are ample for present uses. Butter is weak and quality much complained of, even many good names covering inferior product. Cheese is steady, the supply being fair and trade in good shape. Those who demand "Eastern cheese" are getting much Oregon and Nevada cheddars of very irregular quality, and a wide range in prices prevails. Fresh eggs are firm and higher for large, white selections. Nice chickens are doing better, while the poultry market as a whole is in good shape

because of the anticipated demand of celebration week, when the whole State will come to the metropolis. Potatoes are finding relief through shipping—eleven carloads going to Texas. Onions are steady, the Manila and Australia demand taking many. Canners still want fine peaches and pears and will pay full rates, but the season is nearing the end. Lemons are quiet and in abundant supply, though limes are firm and in light stock. Dried apricots are higher and strong. Almonds are going out of reach and walnuts are strong. Hops are firm and few coming in; growers are holding strongly. Honey is firm. Wool is listless.

## East and West.

WASHINGTON, Sept. 3.—The count of population, so far as it has gone, indicates a total of about 75,778,000 persons. The increase in the total population will be about 20%. The greatest increase has been in the Northern States from Illinois eastward. Four cities in New England show an increase of over 27%; five cities in New York over 35%; four cities in New Jersey 30%; four cities in Pennsylvania 24%, and five in Illinois of 52%. In the Northwestern States one city in Michigan shows an increase of 38%; two in Minnesota of 20%, and one in Wisconsin of 39%. Unless there are larger increases in the roll of population of the far Western States than are now expected, it is probable that the present census will locate the center of population no farther west than that of 1890, although it will probably be shifted farther north.

The census of 1900 will no doubt teach many very important industrial lessons. The foregoing conveys a very significant suggestion of the mutual relations between the East and the West, which seems to us a very striking argument in support of what we have often urged. It shows clearly that the claim which a few of our Eastern contemporaries have made is ill-founded. They have protested against public appropriations for the development of the West on the ground that Eastern agricultural producers were impoverished thereby. We have urged that the leaders in Western development were largely from the East, that they were earning interest for Eastern capital, and that to deny the West the aids to development which clearly lie in the sphere of the General Government shows a lack in fraternal feeling and in business sense. We still believe that point well taken.

But the results of the census bid fair to place a new aspect upon the matter. It is clear that the West is not advancing relatively in population as the narrow Eastern view would indicate. We own that we are a little disappointed at the showing. Local pride and ambition led us to believe that the center of population would take quite a stride westward, and surely there has been great growth in the West, as doubtless the full figures will show. But the Eastern States have grown faster. Their great manufacturing and commercial interests have been building up their cities at a wonderful rate, and while giving much to the development of the West they have kept more for themselves. This ought to put an end to the claim of Eastern depletion and impoverishment.

But there is much more in the facts than this negation. It now clearly appears that the necessity of Western development is greater than could have been claimed before these census figures were known. If the center of population is stationary or possibly moving eastward along a more northerly line, it shows that food products must move toward the Northeast in vastly increasing volume. It is clear that that densely populated portion of the country cannot possibly supply its own needs. It has neither space nor time to do it, and while the Northeast advances in population and wealth because of thriving industries to which its resources and situation directly contribute, the greater burden must lie upon the West to further develop its own resources to feed the busy millions of the East. To meet the increased requirements of the near future, there must be broadly planned and skillfully executed Western development.

There is another closely related condition. The West will be needed as never before to afford a field of activity for surplus Eastern population, and for profitable employment of increased Eastern wealth, as well as to supply a market for Eastern manufactures, which will need both the widest home and foreign avenues of disposition. To secure this to any adequate extent, the several lines of Western development which are now being systematically promoted must be attained. Irrigation must be secured

for the arid wastes and for semi-arid regions which are unsafe because of the dangers which beset them without an assured water supply. The pasture lands must be justly administered in the interest of the people and not in the interest of chance occupants alone. The forests must be protected and preserved and their products intelligently harvested. It has been clearly shown that all these and other related enterprises are for the interest not of a section but of the whole country, and we hope that the very few who have but weakly held otherwise may see by the census disclosures that they have been arguing upon a misapprehension of the facts. The country will grow vastly more in the next decade than it has in the last, and it is the part of wisdom to begin at once with broad lines of development, which will necessarily require decades for their completion. Coming generations will wonder at the lack of foresight and energy in the present generation, if preparations do not now proceed for a future which can be clearly foreseen, and which no patriotic American can contemplate without feeling his heart in his throat. The outlook is profoundly satisfactory. Who can gaze upon it without delight?

THE San Diego county board of supervisors has passed an ordinance making it unlawful for any person to liberate Belgian hares in the county. \* It was shown that the increase from one pair of healthy Belgian hares would amount to 1,723,846 rabbits in ten years, and that with several thousand turned loose the county would be overrun with the animals and the horticultural interests would suffer greatly, as the rabbits are very fond of young fruit trees and grape vines. The ordinance adopted makes it unlawful for any person to have in his care or control any Belgian hare without providing safe and sufficient means of enclosure to prevent the same from escaping and running at large. Every violation of the ordinance is made a misdemeanor, punishable by a fine not to exceed \$100 or by imprisonment in the county jail not to exceed thirty days. This may be well enough, but we must say again that we are not afraid of these animals. If the San Diego county coyotes, wildcats and hunters can not catch the Belgian hare, they must be a slow lot.

THE State Fair has been a great success this week. The pavilion is crowded with taking exhibits and thronged with people. The opening address by Governor Gage was well received. He fittingly alluded to the existing conditions of prosperity throughout the State, and expressed his confidence in the State Fair as a great medium through which to advertise California resources. At the park there is a fine display and well conducted races. The Fair will hold through the coming week, and naturally the second week is the greater. The Dairymen's Convention will open on Sept. 12 and continue three days. All the attractions of the Fair will be maintained in full panoply until the close.

THE Queen of Spain has issued a decree that after the 1st of January next in all railway, mail, telephone and steamship services in the realm, the computation will be made from the hour of midnight to the following midnight in hours from 1 to 24, omitting the words afternoon and night, heretofore in customary use. The hour of midnight will be designated as 24. The interval, for instance, between midnight (24) and 1 o'clock will be designated as 0:05, 0:10, 0:59. The Queen of Spain is surely up-to-date.

EQUINE exports continue. The transport Federica took from this port the other day 259 horses and 168 mules for Manila. The ship was fitted up in splendid shape for the transportation of horses. Her lower and amidship decks were fixed to prevent the waste and dangers that always come up when a typhoon is encountered. The animals are kept in as small a space as possible, and the ship is so fitted as to prevent the horses from falling and injuring themselves in a heavy sea.

It is telegraphed from Washington that the Post-office Department will issue, probably early next week, instructions to postmasters at all the ports of entry on the Pacific coast to submit all packages of plants and fruits from the Hawaiian and Philippine islands to the Boards of Horticulture of their respective States for examination as to whether they contain insects known to prevail in those islands.



# QUERIES AND REPLIES.

## Mosquitoes and Lawns.

TO THE EDITOR:—We find that mosquitoes are more abundant around well-watered lawns than vacant lots with the dry, sandy surface which they naturally have at this time of the year. Many think the mosquitoes are able to multiply in the wet years. Is that true?—CONSTANT READER, Alameda.

It is probable that the popular idea that the mosquitoes can satisfactorily pass their larval period in grass occasionally watered by lawn sprinkling is wrong. It is known that the larvæ commonly known as "wrigglers," can exist in very small amounts of standing water, and can even survive the drying up of the water for a certain limited time, but it has not been shown that the larvæ can develop with such intermittent moisture as lawn sprinkling in such dry air as we have in summer will produce. The latest authority on mosquitoes has just appeared in Bulletin 25 of the Division of Entomology of the Department of Agriculture, by Dr. L. O. Howard, chief of the division. He records many very interesting operations on the life history of this insect. It is shown, for instance, that the eggs of the mosquito are freely laid on grass, from which they are washed by rains into the water, where the larvæ appear; also that these larvæ may live for a certain time in very wet mud; also that grass taken from the sides of a pool and put into a bottle of distilled water gave a few minute larvæ in the water the next morning. This seems to be as near as discovery of mosquito larvæ on grass as has been approached. All the instances include the proximity of standing water either in time or place, and the conditions are unlike those of our lawns. Our own opinion is that the mosquitoes gather about the sprinkling lawns because the humidity of the air pleases them better than the dry air of the vacant lots, and that the perfect insects arise from standing water even in very small amounts in house tanks or other receptacles, or are blown into the places where they are found from distant breeding places. The matter, however, still awaits demonstration.

## Contract Orchard Planting.

TO THE EDITOR:—I am planing to plant twenty acres of deciduous fruits in a Sacramento valley colony. What will it cost per acre to plant this land and cultivate it properly, to Oct. 1, 1901? The land has been cultivated to wheat. If I were at the colony, for instance, could I oversee it and have it done properly for much under \$35 or \$40 per acre? Would it pay me to attempt it? The Fruit Association there will charge \$40 per acre?—OWNER, Mendocino County.

Careful collection of figures from those who have planted deciduous fruits in large tracts places the cost of installing orchard and first year's care at \$25 to \$45 per acre. The difference is in part due to the thoroughness with which the work is done and in part to the varying cost of trees from year to year at the nurseries. We doubt if you could do the work yourself for less than the association will do it, unless you could put in your own labor, and probably they can buy fruit trees in quantity and work teams to best advantage so that they could give you more value for the money than you could get even with a certain amount of your own work. But you must, of course, see that your contract is clear as to good trees and good work all through.

## Roots for the Peach.

TO THE EDITOR:—What kind of roots is the best to bud peaches on, and what time of the year is the best to plant the pits? How deep should the pits be planted, and how far apart each way? If the pits should be kept over winter, how is the best way to keep them?—READER, Fresno.

The peach root is, generally speaking, the best for the peach, although in light, dry soils, where deep rooting to reach moisture is the chief consideration, the almond root is very satisfactory.

Peach pits should be taken as soon as they get well dried on the outside after being cut from the fruit and kept in damp (but not wet) sand in boxes or in a shallow open bed in the shade. They are kept in this sand until they sprout and then planted in nursery rows about 4 feet apart in well-prepared soil about February. The depth depends upon the soil—say 3 inches in light, sandy loam and 2 inches in heavier loam—dropping them along about 6 inches apart if

sprouting. Unsprouted pits should be dropped closer, as some will not start. Fuller details of nursery work are given in "California Fruits and How to Grow Them."

## Johnson Grass.

TO THE EDITOR:—Can you give me any way of killing out Johnson grass, and what month is the best to kill it? I have a small lot of it and wish to kill it before it gets a good start on me, as I have learned that it is very hard to kill. Where does it grow best, in wet or dry earth?—B. I. D., Atwater.

Plow up deeply now, and, if the soil is loose enough to work with a horsrake, get out all the roots that you can and dry in heaps for burning. The more thoroughly you clean the soil of roots the easier will the later work be. This work consists in running a weed cutter a few inches under the surface, so that no shoot of the grass will reach the light. During the growing season of the grass this must be done once a week, whether you can see any shoots or not—in fact, to succeed you must undercut so often that the plant is never allowed to get a green color. You can not kill it by simply cutting in any particular month. Occasional cutting only spreads the plant; it only yields to absolute smothering continued for a long time. Johnson grass grows best where you do not want it, wherever that may be. It will not grow on dry land; if you have a piece of land that is particularly rich, moist and mellow, you will find it there sooner or later, unless you choke it to death whenever it appears on the premises.

## Fall Pruning.

TO THE EDITOR:—Will it do to prune almond and apricot trees in this locality in October?—GROWER, Woodland.

Yes; if the growth has practically ceased, terminal and axillary buds formed and foliage beginning to show limpness and lighter color, pruning can be safely done and it can be much more cheaply and comfortably done than in the winter. We suppose you refer to ordinary pruning. Heavy pruning like large amputations we should not do now, but in the spring, when the plant is best fitted to heal over the wounds quickly.

## Popcorn.

TO THE EDITOR:—What is the market price for popcorn? I have been taking the PACIFIC RURAL PRESS for quite a while and see no market for popcorn.—READER, Woodland.

It will not do to make much fuss about popcorn. The demand is very limited. Just now the best rice popcorn would bring 4 cents and common popcorn 3 cents per pound to any one who wanted it for the grocery trade. The grain has to be a year old to answer the purpose. These prices seem high, but if production were stimulated a little, the surplus would only bring feed prices.

## Calves and Separator Milk.

TO THE EDITOR:—I send you a cutting from an Irish paper about the loss of calves from the use of separator skim milk. May I ask if separator milk does such damage as they attribute to it?—W. J. B. MARTIN, Redding.

You will find this matter discussed at length in our dairy department this week. The trouble with separator milk has been in the way it was used and not in the milk. There is little trouble in this country now because the matter is better understood.

## Growing Acacia Seedlings.

TO THE EDITOR:—Will it do to sow acacia seeds in the fall indoors? Kindly answer this question, as so many say it is too late. Why should they not germinate any time indoors?—J. B. CLIFFORD, Spokane.

You can, of course, sow acacia seed at any time of the year in the house. If you keep temperature and moisture conditions right for germination and growth of the seedlings it does not matter where you are on the calendar.

## The Morris Red Apple.

TO THE EDITOR:—I send a sample of the Morris red apple. These apples grew on young trees and are not quite as highly colored as on older trees. The trees do not grow quite as large or bear quite as heavily as some kinds, but are sure-croppers, bearing every year. It is supposed to be a seedling of Jonathan. The appearance and habit of growth of the tree is identical with Jonathan, except, perhaps, be-

ing a little more slender and willowy in growth.—T. J. TRUE, Forestville.

These apples are very fine and interesting. They are of the Alexander type, but better and handsomer. The variety seems to us to possess strong points of value.

## Eucalyptus on Santa Cruz Mountains.

TO THE EDITOR:—These trees have been growing on these mountains for the last twenty-five years. They have been planted on my place and my neighbors' places. Hillsides are best, as they are more free from frost.—W. H. AIKEN, Wrights.

This is interesting. What can other residents of the mountains tell us about the eucalypts?

# WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending September 3, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

## COAST AND BAY SECTIONS.

Cool weather has continued during the week in most sections. Grapes and late deciduous fruits have ripened slowly. In the Santa Clara valley it is reported that the yield of prunes will fall considerably short of early estimates; the fruit is mostly of small size, and some of it is defective. Peaches will not yield as well as expected. Pears, plums and nectarines will give about the average crop. Some sections report that apples are above the average in quality, and that a large crop will be gathered. Hops are nearly ready for harvest; the yield will be light. Grain thrashing is completed; the yield is below average, and in some places less than last season's. Bean thrashing is in progress; the yield is said to be good.

## SAN JOAQUIN VALLEY.

The weather has been generally cool, with considerable cloudiness in some sections. Light showers of rain are reported at Fresno and other points on Sunday morning. Rain also fell on Monday, and at the close of this report prospects were good for continued showers. Grape picking is in progress in nearly all sections; the quality of the fruit is good, but the yield is not satisfactory in many places. Fruit drying continues, though somewhat retarded by cool weather. Prunes are of good quality, but small in size. Peach drying is nearly completed; the yield is fair. Almond picking and shelling are in progress. Grain thrashing is practically completed, and most of the grain is in warehouses. Sweet potatoes are yielding a good crop. Pasturage is plentiful.

## SACRAMENTO VALLEY.

The weather has been favorable for all growing and maturing crops, and for fruit drying and grape picking. With the exception of prunes, which are now being picked and dried, nearly all deciduous fruits have been gathered. The crop has been very satisfactory. Large quantities of grapes are now being gathered and shipped. Hop picking is nearly completed; the yield is considerably below early estimates. Some farmers have commenced seeding summer-fallow. Light showers of rain fell in the vicinity of Red Bluff last Tuesday evening, and present conditions are favorable for rain throughout the valley.

## SOUTHERN CALIFORNIA.

Cool, cloudy weather during the week has been beneficial to crops. Raisin picking has commenced in some vineyards; the yield is reported light. In the vicinity of San Diego the outlook for apples is better than for several years. Orange and lemon trees are heavily laden with fruit and blossoms. There will probably be a heavy crop of Duarte oranges. Wine making has commenced. Los Angeles canneries are operating entirely with fruit from outside points. Walnuts are ripening earlier than usual in some places. Light sprinkles of rain fell on the 2d.

EUREKA SUMMARY.—Conditions are generally favorable for fruits and vegetables. Grain is harvested in many localities and farmers are baling straw. Apples promise the largest crop for many years. Prospects for potatoes are improving.

LOS ANGELES SUMMARY.—Cloudy and cool weather, with light showers at close of the week, were generally favorable for crops. Bean harvest is in progress; the yield is good in places, light and uneven in others. Raisin drying began earlier than usual.

## Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Sept. 5, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Minimum Temperature for the Week.....	Maximum Temperature for the Week.....
Eureka.....	.00	.08	1.16	.45	50	68
Red Bluff.....	.14	.18	.02	.22	56	100
San Ramon.....	.00	.02	.07	.07	52	88
San Francisco.....	T	T	T	.10	56	68
Fresno.....	.14	.14	.00	.08	56	90
Independence.....	.68	.75	.07	.10	48	80
San Luis Obispo.....	T	T	.00	.18	50	78
Los Angeles.....	.00	.01	.01	.08	56	78
San Diego.....	.00	.07	.07	.07	56	72
Yuma.....	.00	.02	.08	.55	64	100



## THE VINEYARD.

### Resistant Vines in Upper Napa Valley.

TO THE EDITOR:—I hoped to hear from my friends, Messrs. Bioletti and Frank T. Swett, about their visits through the vineyards of Napa valley before we took up the subject of "bench grafting vs. vineyard grafting" again. But as nothing was published by them I took upon myself the task of interviewing Mr. Schoenwald, who was one of the earliest and largest importers of Rupestris St. George into our valley. My two sons joined me in the trip. We found Mr. Schoenwald at home, and very busy getting in his prune crop, which, however, he left at once to show us his vineyard and nursery. He is very enthusiastic about Rupestris St. George as a stock, and said if he was not so old, and could find a suitable piece of land, he would plant 100 acres, confident that he could have a vineyard bearing three to four tons of grapes the third season after planting. He is not, however, enthusiastic about bench grafting, and said that when his first importation of cuttings came direct from France (if I mistake not, 47,000 cuttings) he followed the directions of Prof. Hayne implicitly, built sheds, callus beds, etc., bench grafted 30,000 as carefully as possible, and treated them exactly as he was told. The result was 2500 were successful and 27,500 failures. The grafts which lived were set out in vineyard and are doing well.

MR. SCHOENWALD'S WAY.—This was not very encouraging, and he concluded to follow his own ideas and inclinations. He then led the way to his nursery, where we found a splendid lot of plants, all, as stated, grown from small trimmings, not large enough to sell, and which did not average larger than the size of a common knitting needle at the top. It seemed to me there must be about 20,000 of them at least. Nearly every cutting had grown and formed a bushy plant, averaging about 2 feet high. Adjoining these were a number of rows, grafted in May last with Green Hungarian and Golden Chasselas, on one-year-old plants in nursery—the junction about even with the surface. They had made so close a union that it could hardly be discerned, and the scions had grown from 2 to 3 feet, making splendid, bushy plants. The ground had been hilled up around them, so that the junction was covered; but any roots which started from the graft could be easily rubbed off. When asked what size cuttings he preferred for planting he said, unhesitatingly: "The smaller size, and not too long; they make the best plants. The large cuttings—the size of a lead pencil or over—are too pithy, and do not make so sound a plant. Short cuttings are better than long ones; they will form their roots from the lower joint, mostly, and go right down. Cut out all the lower buds clean, leaving only those which come above the ground. But the cutting out must be large enough, not merely the tip of the bud, for this will cause the dormant buds on each side to start double."

This coincides with my experience in growing grapevines for fifty years. Take small or medium-sized wood for cuttings, plant them not deeper than 10 inches, and the roots will find their way down to moisture, if they are deep-rooting vines, like the Bourgainiana and Rupestris.

VINEYARD PLANTING.—When asked, "How would you plant a vineyard?" he gave his preference to planting one-third with cuttings, to be grafted next spring; rooting two-thirds in nursery, and grafting them there, to be planted next spring, and bench grafting some to fill up vacancies, if necessary. This is about the gist of what we learned at Mr. Schoenwald's. I expected to find him a strong advocate of bench grafting, but was convinced of the contrary. He is thoroughly practical in his views, believes enthusiastically in Rupestris St. George, but not in bench grafting any longer, except as a help to fill possible vacancies—a reserve force, so to say.

MR. BERINGER, whom we saw afterwards, but had no time to go to the vineyards, reports equally favorably of the Rupestris St. George as a grafting stock. He has followed grafting in vineyards entirely, and reports splendid results.

A REPLY.—Now, I wish to answer one point at issue, which all my opponents seem to take, especially Mr. Hoops. They seem to think that I am given to fault-finding with all the experiments made at the State University. On the contrary, I am glad to see them made. Having been an experimenter all my life, and finding them the only source of knowledge, I cannot but acknowledge their value. But what I wish to point out is this: that the practical vineyardist, with often no capital at hand but his own honest labor, must choose the most direct and least expensive way to reach success. He has no State funds, no structures—however cheaply made—at his command. His time is his only capital, which must be worked out to the best advantage by the cheapest ways and means. I sympathize deeply with him, because I have been in the same boat myself nearly all my life. In so far as these experiments lead the way for this class, they have my hearty sympathy and good will. But when I think that they are to

lead astray, and I can see another way to help my brother vineyardist to reach the same result by less expense and less labor, I try to point it out to him. Hoping that this controversy in a friendly spirit may work this result, no matter whether my arguments lose or win, I shall gladly return to it at some future time, when the subject has been fully elucidated.  
Napa. GEORGE HUMANN.

## FRUIT PRESERVATION.

### England's Great Use of Fruit Products.

By way of the consular reports we come into possession of the results of an inquiry conducted in England by a representative of the German Government concerning the large use of fruit products which is quite in contrast with German habits. As California is participating to some extent in the English supply, a few of the facts are quite interesting to us. It is true we make the higher class products and are not engaged in the jam business as some of the British colonies in the southern hemisphere are; it may ere long be profitable for us to put some of our surplus in the jam form, which can be sold more cheaply than the higher class products we are now exporting. Let the application rest for the present, the facts are interesting.

THE ENGLISHMAN AS A FRUIT EATER.—Prosperity, due to its great foreign trade, has led to the increased use of meat as food in England. The consumption of vegetable products has in like manner increased in the land of the "beefsteak eaters," and much attention is given to athletic exercise for the development of the body. While in Germany the potato is largely the principal food, the Englishman eats green salads, vegetables and fruit. The importance of these foods lies in the value of the use of sugar and fruit, and England has recognized this. While, on the average, each person in England uses annually eighty-eight pounds of sugar, the average in Germany is less than twenty-two pounds. The difference in the use of fruit is about the same. Wherever it is possible to use sugar and fruit in the food, this is done in England. There, jam and marmalade, unmixed or in the form of pies, tarts, etc., are eaten after all meals, and especially at breakfast. A workman regards a fruit pie as a sufficient dinner. Sweet biscuits and cakes are manufactured in immense quantities. Temperance eating houses offer tea and chocolate with fruit and pies, instead of beer and alcoholic drinks. In German eating houses and hotels, drinking is almost compulsory.

One biscuit factory employs 6000 workmen and ships daily forty to fifty double wagon loads, each of over 13,000 pounds. Supposing only 25% of this to be sugar, the amount of sugar used in a year must be at least over 20,000 tons.

According to the statement of Mr. Matthieson, director of the jam factory of Clarke, Nickolls & Coombs, 400,000 tons of jam containing 225,000 tons of sugar are produced annually in England, while the entire industry uses altogether over 300,000 tons. In jam and marmalade alone, each person in England uses daily seventeen grams of sugar. If Germany can, through the increased use of domestic fruit products, raise its average to ten grams, this will cover 10% of the entire German sugar production.

THE MANUFACTURE OF JAM AND MARMALADE IN ENGLAND.—The fruits are first stemmed in machines provided especially for the purpose; then they are cooked soft in a copper pan in order to free them from seeds and skins by passing them through other machines. This cleaned fruit is thickened by further cooking and set aside in stoneware vessels until needed. An advantage of this storing of partially prepared jam is that the factories can work uninterruptedly through the fruit season and lay aside other work for a less busy time. This is rendered possible by the sterilizing of the fruit by cooking. If time permits, the cooked fruit is sweetened by clarified sugar, fifty-six parts of sugar being used for sixty parts of fruit. This ratio varies, however, as allowances must be made for acidity, sweetness, flavor, etc. In order that the jam may remain soft enough, which would be hindered by a crystallizing of the sugar, after it is finished 10% of capillary syrup is added. In addition to this warm process for the manufacture of jam, there is also a cold one. The warm process renders possible the utilization of unripe fruit without causing danger to the health of the consumer. The cold process is used with ripe fruit. This method preserves the flavor, which is lost under high temperature and high pressure. The use of the word marmalade in England is confined to jams made of oranges and lemons which are cooked with their thin skins, whose pectin changes the jam into a mass resembling jelly.

GERMAN JAM AND MARMALADE.—Germany already manufactures so-called apple butter and plum and pear marmalade, especially in Strassburg, Coblenz and Metz. Most of this does not, however, deserve the name of fruit marmalade, as it is made from fragments left over from manufacture of dried fruit and fruit wine. A comparison of English and German

wares will reveal the difference. The English marmalade is good fruit mush and sugar; the German consists of unappetizing fragments without any sugar. In England, 10% of starch syrup is added; in Germany, 60% to 70%, with its ingredients of sulphuric acid, dextrine and gallinoline. The Englishman will not even use 10% of German watery potato syrup, as this injures the quality of his jam. He gets fine glucose from America, because it is there made from maize, instead of potatoes, and because the American capillary syrup does not, like the German, contain sulphuric acid. German marmalades are accordingly mostly food counterfeits and cannot win a place in the world's markets.

GERMAN FRUIT CULTURE AND THE ENGLISH DEMAND.—Although ripe winter wares, especially apples, are most suitable for shipment to England, there is no need of Germany restricting itself to this one fruit. It would be no mistake to send to England in future all of the proposed increased production; for, irrespective of the fact that there can be no possibility of overproduction in Germany, which now spends annually nearly \$15,470,000 for imported fruit, the consumption of fruit in the broad strata of the population cannot be increased by compulsory measures. A change of this kind must be gradual. Nevertheless, Germany has a market in England, where, as a neighbor State, it has advantages which should enable it to compete with all other countries. Germany can easily win this field; for, according to a statement of the German consul-general at London, the Berlin market throws that of London entirely in the shade. The consul-general especially advises that attention be given to strawberries, raspberries, gooseberries, currants and plums.

The jam industry promises to have a favorable influence on fruit culture similar to that exerted by the sugar industry on the cultivation of beets. Consequently, intelligent attention must be given to the industry, the large fruit growers becoming also manufacturers and the small ones merchants. If this be done, the fabrication profit will mean also an increased soil profit. But to accomplish this, it is necessary that Germany must produce pure, unadulterated and good wares, for no market can be won with any other sort. Germany can do this as well as England, as the science of jam fabrication lies not in secrets nor in machinery which cannot be procured, but in energetic work with a distinct object kept clearly in view.

The introduction of the jam industry, if successfully accomplished, will supply many people with work throughout the entire year. In the manufacture of dried fruit especially there is much waste material which, when fresh, can very advantageously be made into jam, as it is particularly rich in pectin. The increased manufacture of fruit wine and fruit juice will also be advantageous to the fruit industry; likewise the production of non-alcoholic drinks, jellies, etc.

The German fruit industry is still unimportant; but if the German farmer can be induced to devote more energy to this branch of his business, as he did a few years ago in behalf of beet culture and the sugar industry, he can safely count on securing a profit which can be excelled in no other way. Then Germany will be able fearlessly to meet American competition in fruit and sugar.

## THE FIELD.

### The Farmer's Interest in Good Seed.

TO THE EDITOR:—One of the newest developments of scientific agriculture on this coast is that of seed testing. This industry, of such high practical importance to the agriculturist, has been heretofore almost entirely neglected by Western farmers; in the Eastern States its importance has been recognized for a long time, and its fullest development has been attained in Europe. Particularly in Germany and Switzerland seed testing has grown to the greatest importance, and at the present time it is supported by strict government laws, which regulate the quality of seeds placed on the market. Laws similar to these, requiring the age, purity and germination percentage, would be of the greatest benefit to the American farmer; but, in their absence, planters should awaken to the advantages of sending their seeds to be tested by an expert before planting.

CHEAP, BUT COSTLY.—To begin with, cheap seed is the dearest investment a farmer can make. The price of seed is relatively so small, and its quality has such a great influence on the crop, that it is a false economy to purchase anything but the best obtainable. "As a man soweth, so also shall he reap," and the sowing of seeds which are mixed with old seeds, chaff, dirt or weed seeds results in sparse crops, often weakly and irregular in size, and slow and uneven in maturing.

HOW DOES SEED TESTING HELP?—How does seed testing prevent such results? The tests are of two kinds—for purity and for germination. The purity tests show out of a given package what proportion is really the desired variety, what proportion is dirt, chaff and other worthless matter, and what propor-



tion is seeds of undesired plants or weeds. In the first place, by such a test the planter will often find that the poorer grades of seeds are dearer than the best grade, for the reason that they contain such a proportion of undesirable material that the real seed in them costs more than the best grade. For example, suppose the best seed costs 35 cents per pound, and a poorer quality can be bought for 30 cents; if, then, this latter is only three-fourths pure, the buyer is really paying 40 cents per pound for the good seed contained in it. Moreover, the impurities in the poor seed are not merely dirt and chaff, they are often the most noxious weeds. The so-called Russian thistle, one of the worst weeds in the middle West, was thus brought to America, by its presence in flaxseed. If, then, the farmer sows a large proportion of weeds while planting his crop, how greatly will the cost of exterminating these exceed the slight additional expense of pure seed?

Furthermore, the purity test will reveal whether seeds are true to name or not. If the seedsman furnishes the buyer some other kind of seed, resembling the kind desired, as in the different kinds of grain, etc., the results will always be disappointment, and sometimes failure and loss of crop. It is worth the expense of many tests if such a mistake is discovered only once.

**GERMINATION.**—Such is the value of the purity test. The germination test is equally important. The proportion of true seeds in a package having been ascertained, this test is used to determine the proportion of these seed that will actually grow. In all samples of seed there are invariably some seeds more or less lacking in vitality, and the percentage of weak seeds is sometimes large. Here, again, figures are instructive. If the farmer buys seeds at a certain price, and they only produce one-half as many seedlings as first-class seed of that variety should, would it not have paid him to have bought a better quality at a slightly higher price? For, if such inferior seed be planted, unless a double quantity is used, either replanting will be necessary or a sparse crop will result.

The difference between good and bad seed being then so great, the benefit of laws regulating the quality may be easily perceived. But, in the absence of these laws, the farmer may secure his own protection by submitting his seed to an expert to be tested. The cost is but nominal, and the certainty he thus obtains amply repays him. Reputable seedsmen generally have their produce tested in this way for their own information and advantage; but they have many unscrupulous competitors, against whom the farmer's only protection is as indicated. And, in any case, if the planter uses only seed which has been shown to be good by these tests, his mind will be at rest concerning it; and if the crop is wholly or partially a failure, he will know for a certainty that not the seed, but some other condition, is at fault.

Berkeley.

ALICE M. CRANE.

## THE APIARY.

### Why Do Bees Swarm?

Prof. A. J. Cook of Claremont, California, writes for the American Bee Journal his conclusions about swarming:

I think without doubt bees are incited to swarm because of something disturbing their peace. This is most commonly a crowded condition of the hive just at the dawn of the honey harvest. The combs are full of brood, the hive filled with bees, and the bees feel uncomfortably crowded and thus are impelled to divide up or swarm. That this is not the only cause is certain. Bees often swarm when they are not crowded at all. I think the most common cause, other than crowded condition of the hive, is from lack of honey. I have often known starvation to cause bees to swarm out and push for a new home. Here it would seem that they could not improve their condition by swarming, and we must conclude that a disturbed state impels them to act. An untidy condition of the hive also drives bees out, or causes them to swarm. Nearly all beekeepers in the northeastern part of the United States have not infrequently had early spring swarms after a cold, disastrous winter. With spring came serious dysentery, and bees, queen and all rushed forth for a new home. While this does not seem so unreasoning as the last, the final result could not be greatly different.

When bees swarm naturally, that is, because of an overcrowded condition of the hive, nearly all the bees that are mature enough to fly, including drones and queen, push out from the hive in the event of swarming. It is not true, however, that the queen leads the swarm, as has often been stated. As early as 1870, I commenced the practice of clipping the queen's wings, and would advise all beekeepers to do so to-day. Thus I have many times watched the swarm as it issued from the hive, and likewise noticed the egress of the queen.

I find the queen rarely goes out until the last of the swarming out of the bees. Again, it is often stated that in case the queen does not join the bees in their swarming, either because she cannot or will not,

then the bees do not cluster, but return to the hive. The last part of this statement, I think, is invariably true, that the bees will not go off without the queen, but will always return to the hive. It is not true, however, that they will not generally cluster. In my experience they will almost always cluster, I think, indeed, almost as often as the queen goes with them. For I have known, very rarely, however, the bees to go forth with the queen and yet return to the hive without clustering at all.

The time of swarming is generally from eleven to two, or near the midday period; yet I have known the time to vary not a little from this. I have known swarms to come forth at five or six in the afternoon. The late Mr. Moon told me that he once knew a colony to swarm at the time of full moon, in the moonlight. This erratic swarming as to time, I think is almost always limited to after swarms, where a young queen goes out with the bees.

The place of clustering is a matter of some interest. A tree or bush seems to be preferred, probably because it is convenient for the bees to cluster on them. I have known a post or fence to serve them in such way. The height, too, at which the cluster is formed is a matter of interest. It is usual for the first swarm with the old queen to cluster low; while after swarms, which of course are attended by young queens, may cluster far up in tall trees. I believe I have known clusters as high as 30 feet, in tall trees.

Why do bees cluster at all? is often asked. We must remember that the old queen may not have tried her wings in flight for over a year. That she is able to use her wing muscles at all is hard to understand. I believe that the clustering is to give her a rest after her first exercise as she flies out, before she takes her long journey perhaps of one or two miles. It has been reported that bees sometimes do swarm and not cluster at all. I have known one case of this kind, myself. It was an after swarm, and, of course, a young queen went with the swarm.

When do the bees select their new home? is a question of interest. It has been suggested that the bees cluster so that scouts may go forth in search of a new home. I have had positive evidence on several occasions that scouts go forth one, two, or three days before, to look out and clean out their prospective home. Once it was in the side of a house. The bees were noticed just before the dinner hour, busily going in and out high up by the cornice. It was supposed a colony had entered and taken possession. After dinner, we were surprised to find that the bees had all gone. We supposed that they had found their new home obnoxious. The next day a large swarm came and took possession of the place. I have since known a number of such cases. I have little doubt but that this is always true, and that the bees cluster simply to rest the queen.

The rate of flight of the swarm is various. I once knew a swarm to fly nearly a mile, and one of my students followed it on foot the whole distance and located its new home. I have known other cases where one would need to be well mounted to keep up with a colony. After swarm fly with more speed.

We all know that there may be many queen cells in the old hive when a colony goes forth. I think that a first swarm rarely if ever issues until one of these cells is capped over. Some bees, especially the Carniolans, form an excessive number of such cells. We know that often all these queen cells are destroyed after the queen emerges from the first one. In case of such destruction the cells are always cut open on the sides. If, on the other hand, the queen liberates herself and comes out to fly forth, the cell is open at the end. In case several swarms are to issue—I have known five swarms to come out one after another from a single colony—the bees guard the queen cells so that the first hatched queen cannot destroy the others. As many beekeepers have observed, rarely do several queens go forth with a new swarm. Some of our ablest beekeepers think that, in such case, the queens have been held some time in the cells, and, in the excitement of swarming, the guards have lost their vigilance, and so several queens rush out with the new swarm. Much more rarely two queens will dwell together in a colony, for a time, both laying eggs.

## THE DAIRY.

### White Scour in Calves.

**ITS CAUSE.**—Enteric disease, commonly called "white scour," is, unfortunately, so well known that description is scarcely needed. It is a form of gastroenteritis, and is akin to a fatal disease to children, common where the vessels containing children's food are not kept in a clean condition. The disease is believed by some to be caused by a minute organism found in milk kept in dirty vessels, or that has been milked from cows whose udders are dirty, from the cows having lain in dirty places, or through their standing in dirty ponds. Calves are rendered more susceptible to the disease either by being crowded together in dirty houses where they can suck one another or by being fed in an irregular manner. The giving of skim or separated milk at too early an age, allowing the calves to remain too long fasting, the

giving of large quantities of skim or separated milk, unmixed with linseed or other similar ingredient, at one time, are all dangerous as making the young calf more liable to diseases of digestion. In a state of nature calves suck their dams frequently, and if cows are kept upon clean pastures, where there are not dirty ponds that are made unhealthy by the excrement of the cows, there will be little disease amongst calves.

The best way to keep calves healthy is to keep their houses clean and well drained. The bedding of calves should be dry. The solid litter should be removed every day from the houses. In some cases calves are kept singly in pens, and fresh straw is supplied for bedding each day. The cleansing and disinfecting of calves' houses at the commencement of the season is most desirable. After the house is thoroughly cleansed, a disinfectant should be sprinkled over the floors. Carbolic acid diluted with water will suit for this. Should the disease break out, the calves must be at once removed to another house, and the apartment where they had been should be thoroughly cleaned and disinfected.

**DISINFECTION.**—Disinfecting the premises is most easily and effectively done by sulphur fumes or by chlorine fumes. Having securely closed all openings, place in the center of the apartment to be disinfected a vessel containing burning coals or turf. Upon the fire put a quantity of "cane brimstone," two to ten pounds, according to the size of the apartment. When the sulphur has lighted leave the place quickly, as the sulphur fumes are unpleasant and dangerous. Close the door and paste paper around the edges in order to keep the fumes inside. The effectiveness of disinfecting with sulphur or chlorine fumes depends upon keeping as large a quantity as possible in the apartment. Chlorine gas is a thorough disinfectant when it is properly applied, but it is more troublesome than sulphur. It is prepared by pouring muriatic acid into an earthenware vessel containing chlorate of potash. The vessel must be kept at a height in the apartment, as the gas that will be given off is heavier than the air and will fall towards the floor. The apartment must be kept as nearly airtight as possible, to secure thorough disinfection.

**FEEDING.**—As regards feeding, calves should have the first milk (biestings). This is absolutely necessary for the future health of the animal. If the cow is not allowed to lick the calf, a smart rubbing with a straw wisp should be given to the young animal. This rubbing sets up a healthy action in the skin and muscles. After a couple of hours the calf may be allowed to suck the cow, whose udder should be clean, or it should be fed with a small quantity of the biestings taken direct from the cow. The calf may get about one pint of biestings five times a day during two days. Afterwards, and during a fortnight, the calf should be fed four times a day with new milk, commencing with one pint at each meal, increasing the quantity gradually. After a fortnight a mixture of one-third skim milk or separated milk, with new milk, may be given, and the quantity of skim or separated milk may be increased until the calf is a month old, when the giving of new milk may be discontinued. Flaxseed jelly, made by boiling flaxseed in water, is a good addition to separated milk, when the new milk is withdrawn. This may be given for a fortnight or three weeks after the calf is put on separated milk. About one-half pound per day is a ration. As to the important question whether cakes or meals of various kinds should be given to calves raw or cooked, the results of experiments show that, on the whole, calves will thrive best on a diet of dry meals or cakes, when their principal food is skimmed or separated milk. From an early age a little sweet hay should be available for calves when they are housed. This is necessary, as the rumination ("chewing the cud") commences with calves at an age earlier than is generally supposed. Stomach derangement may take place if coarse straw or other food difficult of digestion is eaten when calves are very young.

**KEEP THE CALVES FROM SUCKING EACH OTHER.**—As soon as the weather becomes fine the calves should be allowed to be as much in the open air as possible. They will soon commence to eat grass. Precaution against their sucking each other should be taken. The American nose gag appears to be the best method for securing this object. Its use does not prevent the young animal from grazing. The use of separated milk or skim milk may be continued until the calf is four months old, or longer, if a more profitable method of using the milk is not available. In all cases separated milk should be used sweet, and as fresh as possible from the separator. It is well to remember that cleanliness in the calves' houses, cleanliness in the vessels in which milk is kept, and cleanliness in the methods of calf feeding are essential. Feed frequently with moderate quantities of food, and have everything connected with the feeding kept scrupulously clean.

### Filling the Silo.

The latest book on the silo is soon to be issued by the Orange Judd Co., and when ready will be offered through THE PACIFIC RURAL PRESS. The author is Prof. Thos. Shaw of Minnesota. In anticipation and



as a very timely topic we give the author's hints on filling the silo:

Whether crops should be wilted or not before being put into the silo, and also the degree to which they should be wilted, will depend largely on the natural succulence in the crop and the stage at which it is cut. Corn cut at the proper stage may be put directly into the silo, but corn less mature should be wilted more or less according as it is lacking in maturity. When but a limited quantity of silage is wanted, and where labor is not easily obtained, it may sometimes be wise to store crops in the silo in the uncut form. But this method of storing them is not always practicable. In a large majority of instances it will be more satisfactory in many ways to store food in the silo after it has first been run through a cutting box.

**CUTTING.**—The lengths to which the food should be cut is yet an unsettled point. In fact, it will vary to some extent with the crops stored. All things considered, however, short lengths in the food cut are preferable to those longer. They may be packed more tightly and handled more readily when feeding than silage of longer lengths. Those from  $\frac{1}{2}$  to  $\frac{3}{4}$  inch, of such hard substances as corn or sorghum stalks, are in favor with many. Intermediate lengths have been objected to because of the soreness of mouth sometimes induced in cattle from biting on the ends of the cuts rather than on the sides of the same, which they must needs do if pieces are long.

**FILLING.**—The silo may be filled quickly and without any interruption save that which is made by taking the usual rest required by the workhands; or, it may be filled slowly at intervals, as may be convenient. The intervals of cessation in filling should not at any time cover many days lest the exposed silage should begin to decay, unless it is absolutely necessary to wait after the silage has been partially filled for some other crops to mature. In such an event more or less of the food will be spoiled than was last put into the silo. This ought to be removed before the filling of the silo is resumed. When but a short period is covered in filling the silo, although it should be filled to the brim, it will not remain full. The silage will continue to settle for several days, so that a large space will be left vacant above the silage. Where two silos are to be filled that are near at hand, the difficulty will be met by filling both at the same time; that is to say, by filling one in part and then the other in successive alternations until both are full. More time is thus given for the silage to settle.

**PACKING.**—The proper distribution of the food in the silo is a matter of no slight importance. When it is allowed to fall from the carriers which convey it to the silo, the mass rises up in the center in the shape of a cone. From this cone the food rolls down toward the sides of the silo. But in doing so the lighter portions, as, for instance, the leaves of corn, are forced outward by the heavier portions, as the grain and stem. The quality of the silage, therefore, on the outer edges is frequently inferior to that in and near the center of the same, especially when it contains less grain. If, therefore, the quality of the silage is to be uniform in the silo it must be carefully distributed from the first. But still greater harm will follow from allowing the silage thus to pile up in the center. It will not settle evenly. The pressure is greatest in the center, and the tendency in settling will be to draw away the food from the walls of the silo, and air will thus be admitted, with the result that much of the mass on the outer edges will be spoiled. Loss from this source may be prevented by first distributing the food evenly during the filling of the silo, and then tramping it so that the impaction of the mass will be about equal in all parts of the silo. The amount of tramping required will be least in the center of the silo and greatest on the outer edges.

## THE POULTRY YARD.

### Plucking Hens to Help Moulting.

Modern practice seems to doubt whether a hen should be allowed to change her own clothing. An Eastern poultry writer believes in helping the matter in the interest of quicker laying. He says:

During July and August, when the hens have fully matured their feathers, and are inclined to be broody, I pick them, not for the profit I derive from the feathers, so much as to assist nature. The feathers, however, are much nicer than those picked from a scalded fowl, and can be used for cushions and pillows, when the feathers of water fowls are not available. The chief profit in picking hens lies in the fact that this operation hastens the moulting season, and they are ready to begin work as layers in early October, whereas if left to the slower course of nature, they would not be ready to lay before late in winter or early spring, when eggs are lower in price. A hen that moults early will begin laying early. There are several advantages in this early moulting. Commencing while the weather is warm, the hen is more comfortable and not exposed to the chilling winds and

storms as if moulting was delayed until October or November, as is often the case. She has a free range and a variety of food, and all her surroundings are conducive to the rapid growth of the new crop of feathers.

I select such hens as have been laying steady during the summer and need a vacation during the heated term. In this way I am sure to get the choicest of the flock for my winter layers. I endeavor to have the one-year-old hens ready for business by Oct. 1. These, with the early-hatched pullets, are the ones I depend upon for winter eggs. I leave the more undesirable ones without plucking to keep up the egg supply until the others have gained their new feathers, when they are shipped to market as fast as they show signs of moulting. In order to distinguish between the picked and unpicked, I mark with a leg band those I wish to keep. I like yearling hens that have moulted better than pullets for early winter layers. They generally lay every day, while the pullets usually lay on alternate days for the first few weeks.

To practice this method, begin as soon after July 1 as you can find suitable subjects. The feather must be mature, in order to pick easy, and, when picked, the hen should have extra feed. When ready for laying, keep all hens in a separate yard or range, as they need different care and food from the pullets. The tendency of the early fowls is to fatten easily, and unless due care is exercised they will become too fat. This is especially true of such breeds as Plymouth Rocks, Wyandots, Brahmas, etc. For winter feeding I would urge that the grain ration for old fowls be cut down to the minimum and its place supplied with bran, steamed clover, vegetables, green cut bone and oyster shells, with plenty of grit and pure water. I feed my fowls a small quantity of millet scattered in dry straw. I have it in the bundle, and give them a bundle at night after they have gone to roost, so that they can go to their scratching room early and work for their breakfast. If fowls are given plenty of exercise, they will not often get too fat. In feeding millet to small chicks, once or twice a week will be sufficient. Feeding every day has increased the death rate materially, I think, due to the action of the millet seed on the kidneys.

### Wholesale Poultry Slaughtering.

California growers are much interested in the great poultry enterprises of the Central West because one of the objective points in all such things is the California market, and our home product has to compete with the shipments they make. The American Agriculturist tells of the erection of a 200x53-foot slaughter house at Kansas City, giving the poultry-killing plant there a capacity of 15,000 chickens per day and employing 125 to 150 hands. It has been suggested that the poultry packing business would eventually be controlled by the large concerns, just as the beef business is at present. The packers in Kansas City are stated to be buying five times the amount of live poultry that they did five years ago.

The dressed poultry is sometimes shipped in earload lots to distant markets, large shipments being made to California. About 80% of the stock handled is chickens and turkeys in equal proportions, while the rest are ducks and geese. The principal company has a list of over 2000 poultry shippers and also employs fifteen men to buy poultry in earload lots. It has a storage capacity of 2,000,000, where the poultry can be frozen and held to a temperature of about 10° above zero. Fully 20% of the output is used in canned chicken, chicken soup and similar preparations. Over 100,000 pounds per year goes to supply eating houses along a single railroad line. Most of the live poultry comes from Kansas, Missouri, Iowa, Nebraska, Oklahoma, Texas and Arkansas. The buyers make contracts with the handlers of poultry in the different towns, one of the company's cars comes along at the stated time, the poultry is delivered and the cash paid on delivery. As soon as the ear is full, it proceeds direct to Kansas City.

**THE POPULAR BREED.**—Some effort is being made by the largest packing company of Kansas City to improve the stock throughout the shipping country. Supt. L. Simonds of the Armour Co. writes: "We think the States immediately surrounding Kansas City comprise the finest poultry section in the United States. We have not only encouraged the raising of blooded stock by letter and conversation, but we have also picked out considerable stock from our daily receipts and sold the same to poultry raisers in this section as a basis for starting a flock of high-grade chickens. We consider the Plymouth Rock the best all-around breed, as they are fair layers, sell for premium as young chickens and make the best fowls. Our endeavor has always been to introduce a breed of stock that will not only prove the most merchantable when placed upon the market, but also combined with this a breed that is a good egg producer, and it is our conclusion after a good many years' experience that the Plymouth Rock is the best all-around chicken. As young chickens they develop very meaty breasts, over a medium or rather small frame, and when dressed out their bright yellow legs and yellow skin make a very fine appearance. Take these birds late in the year, when stock is scarce, and they will bring from 2 cents to 4 cents a pound more than the common run of stock."

## THE SUGAR BEET.

### Beet Prices Here and There.

Mr. Herbert Myrick, the author of the standard American treatise on sugar making entitled "The American Sugar Industry," has been making personal investigations this summer in Germany, and has some fresh comparisons in the Orange Judd Farmer which will be interesting to our readers now that this year's beet crop is maturing.

**AMERICAN BEET PRICES.**—In this country, farmers are paid \$3.50 to \$5 a ton of 2000 pounds for sugar beets delivered at the factory, depending upon quantity and purity of their sugar. Beets being rich in sugar, many realize even more money. The price to be paid by the big Spreckels factories in California this fall is \$4.50 per ton, regardless of sugar content, but they are pretty sure to average of fine quality. The basic price for beets delivered to American factories probably averages \$4 per ton for beets containing 12% sugar of 80 purity. If better in quality, the price may be more; if poorer, less. The American beet grower can doubtless average \$4 per ton, taking one year with another. He raises ten to fifteen tons per acre on land that is worth \$50 to \$200 per acre.

In Germany the farmer probably averages \$4.50 per ton for the crop. He gets twelve to sixteen tons per acre on land that is worth \$150 to \$400 an acre. Beets are almost universally paid for in Germany on their sugar content. For 1900 the basic price in some factories is \$3 per ton for beets containing 12% sugar and 40 cents a ton more for each additional 1%, or 45 cents per ton less for each unit below 12, or fractions thereof. As the beets run 13% to 15% sugar, this is equal to \$3.40 to \$4.20 per ton. The farmer is furnished free seed and also allowed 800 pounds pulp for each ton of beets delivered. These prices are based on the expectation that the factory can pay them and make a handsome profit if able to sell its raw sugar at \$2.75 per 100 pounds. If a better price is realized, the farmers also get the bulk of it as an extra dividend on beets at the close of the campaign. Another factory pays \$4.40 as a straight price for beets that usually run 13% to 15% sugar, keeps the pulp to feed, but gives the farmers free seed.

Many sugar mills are owned by farmers' joint stock companies and run on the co-operative plan like our co-operative creameries. In such cases all expenses, reserves, etc., must be paid, and the balance of the money received for sugar is divided pro rata among the patrons, according to quantity and quality of beets furnished. The farmers do not get any more out of such co-operative factories than from the proprietary milk, but in former years the latter paid much less for beets, which forced co-operative mills to be established.

**COMPARATIVE EXPENSES.**—In Germany common labor (women, boys and girls) for working in German beet fields at hoeing, thinning, pulling, topping, etc., gets 15 to 30 cents per day without board and 25 to 50 cents with board; men get 25 to 40 cents a day without board and 50 to 65 cents with meals. The "day" is about twelve working hours. Common help in and about the sugar factory get 50 to 75 cents per day and board themselves.

In America we pay two to three times these wages, but we are using machinery more and labor less, both in field and factory.

Money costs less in Germany than in the United States; but, all things considered, I am convinced that at \$4 per ton as a basis the American beet grower makes a much bigger profit for himself and his investment, besides paying two or three times as big wages, than does the German farmer.

**FACTORIES.**—Our American factories cost about \$900 per ton capacity for wood, building and equipments, as an average; in Germany \$300 to \$400. In a German factory of 500 tons daily capacity the director or manager gets \$1000 to \$1500 a year, the treasurer or cashier \$500 to \$800 and chemist, sugar boiler and master mechanic each \$400 to \$600 a year. Each of these five important men also gets a house or tenement free, with garden, coal, oil, sometimes a horse and carriage or free pass on the railway, besides a Christmas present of 5% to 10% on their salary as a sort of co-operative dividend to labor. Our American factories gladly pay two, three or even four times such salaries for capable men in these positions.

**BRIGHT PROSPECTS IN THE STATES.**—Sugar is much cheaper in the United States than in Germany, and consumption per capita is almost three times as much. Hired help, servants, etc., are not supposed to have sugar in their tea or coffee in Germany. The American tariff is much less than the German, and we have practically no direct State aid to the industry, excepting temporary bonuses in New York, Michigan, etc., which are more bother than they are worth. Continue to protect the American farmer from the coolie product of the Philippines, Cuba, etc., and our American beet sugar industry will ere long become a vast boon to American agriculture!



## Agricultural Review.

### ALAMEDA.

**DISTRICT FAIR.**—Oakland Enquirer, Aug. 31: The Golden Gate Agricultural and Mechanical Fair Association's annual exhibition will be held on the track of the California Jockey Club, Emeryville, from Sept. 22d to 29th inclusive. The present board of directors for this district (No. 1), which comprises Alameda and San Francisco counties, is composed of W. M. Kent, P. E. Dalton, A. C. Gurnett, C. S. Crittenden, R. J. Milroy, Harry Meek, C. S. Neal and Alfred Cohen. The officers of the board are: William Kent, president; A. G. Gurnett, vice-president; Joseph I. Diamond, 306 Market street, San Francisco, secretary, and the Union National Bank of Oakland, treasurer.

**HEAVY HAY RECEIPTS.**—Oakland Enquirer, Aug. 31: The receipts of hay have been exceptionally heavy during the past few weeks. Contra Costa county is shipping more hay into this city than ever before, and it is estimated that 100 tons of hay are received in this city from that county daily. Considerable hay also comes from Haywards and vicinity. From Livermore hay is being shipped to this city on route to China for the U. S. cavalry. The hay is put into what is known as the "compressed bale." It is smaller than the ordinary bale and yet about twice as heavy.

### BUTTE.

**TO BUILD A PACKING HOUSE.**—Chico Enterprise, Aug. 30: At a meeting last evening, called to consider erecting a suitable building for a fruit receiving station and packing house, it was decided to issue fifty shares of stock at a par value of \$50 each. Thirty-two shares were subscribed for by Messrs. W. J. O'Connor, B. Cusick, D. D. Brooks, A. Lowe, L. H. McIntosh and T. L. Bollander.

### FRESNO.

**FIG PACKING BEGUN.**—Fresno Republican, Aug. 30: The fig packing season is now fairly on and Seropian Bros., Markarian Bros. and T. J. Hammond are engaged in packing and putting up the fruit in neat cartons, for that style of packing has been adopted for figs as well as raisins. The Inderrieden Company will also handle figs this year and will begin packing Monday. The price for figs at present is better than that promised at the beginning of the season. This is due to the prohibition of importation of the Smyrna fig, the absence of which will create a demand for the California White Adriatic, which is the only variety packed to any appreciable extent. However, while the price of figs in the sweatbox has advanced from 2 cents to 2½@3 cents a pound, the market price for the prepared article has not gone up, although it is becoming firmer. Last year figs in the sweatbox sold for 5 cents a pound. The ruling prices for packed figs stand as follows: Three-crown, 10-pound cartons, 55 cents; 4-crown, 60 cents; 6-crown, 75 cents; 5 layers, 50 cents; 4 layers, 60 cents, and 3 layers 70 cents. Figs packed in bulk are selling at 3 cents a pound.

**FRUIT PACKERS WANTED.**—Fresno, Sept. 1: The packers committee has decided to send printed circulars throughout the valley, giving the facts of the lack of female labor here and inviting comers. With the railroads an arrangement has been made for a two-thirds fare.

**CO-OPERATIVE DAIRY INCORPORATED.**—Sacramento Record-Union, Sept. 1: Articles of incorporation have been filed with the Secretary of State for the Selma Co-operative Dairy Association. Directors, J. E. Turner, W. T. Martin, G. W. Holmes, W. A. Durham, L. J. Hansbarger, all of Selma. Capital stock \$10,000, subscribed \$600.

### KERN.

**WATER APPROPRIATIONS.**—Bakersfield Echo, Aug. 30: J. P. Cuddebach of Tehachapi has filed notices appropriating 25 inches of water at each of the following places: Otto spring, Upper Otto spring, Sulphur spring and Studhorse spring.

### KINGS.

**WILL OPERATE THE DRIER.**—Hanford Journal, Aug. 31: Messrs. Paige & Montague of the Lucerne vineyard have decided to operate their drier this fall and C. W. Chittenden will be in charge. The grapes from the vineyard have all been sold to the winery, but the drier will be used to cure raisins for farmers who may not have the facilities for drying their entire crop. As the weather does not appear to be first-class for sun drying, this action has been taken.

**LARGE BUNCH OF GRAPES.**—Hanford Journal, Aug. 31: The largest bunch of grapes we have seen for years was brought in by O. C. Brown. It was from the vineyard of Elmer Young. The jolting of the buggy knocked off many of the grapes, but the bunch weighed 5 pounds 10 ounces.

It weighed over 6 pounds when taken from the vine. Another curiosity Mr. Brown brought us was a small bunch of grapes, the stem of which had rooted in the ground. There were ripe grapes on each end of the stem and quite a number of roots, an inch or more long, in the center of the stem.

### LAKE.

**SPLENDID BLACKBERRY.**—Lakeport Bee, Sept. 1: R. P. Eachus has a blackberry vine that is a record breaker. He has picked from it in one week thirty-one boxes of berries and estimates the remainder at sixty boxes. It is the Himalaya Giant.

### LOS ANGELES.

**WATER DEVELOPMENT.**—Pomona Times, Aug. 29: The La Verne Land & Water Co.'s well has been sunk deeper and is now yielding 44 inches of water. The San Dimas Irrigation Co. is pumping 58 inches from its new well and is at work installing another plant at the cienega on one of its flowing wells to increase the flow. Considerable San Dimas water is being sold to outsiders. As high as 10 cents per inch per hour has been paid.

**FARMERS' MEETINGS.**—Pomona Times, Aug. 29: The Horticultural Club of Claremont and Farmers' Club of Pomona will hold a joint meeting of unusual interest at the experiment station, Sept. 1. Prof. Wickson will speak on subjects of importance to orchardists and how to beautify our road front; J. W. Mills will discuss the co-operative stores; C. C. Chapman, care of the orchard; E. W. Holmes, future of the orange, and Prof. Cook, beneficial insects.

**FUMIGATION PAYS.**—Los Angeles Herald, Sept. 1: Last year there were only about 500 tents in the county, and much loss was occasioned by the inability of the orchardists to have their trees fumigated. Oranges that had been fumigated last year sold for from \$1.25 to \$1.50 per box, while those which had not been fumigated brought only \$1.10 and \$1.15 per box. The expense of washing the fruit is greater than that of fumigating the trees. It is estimated that there will be about 1000 tents in use this year. With those the contractors will be able to fumigate about two-thirds of the trees in the county. When all the tents are in operation, between 12,000 and 15,000 trees will be fumigated nightly, and the process will be continued from now until February. A. R. Lowry will have about 300 tents in operation and Dr. Dunn about 200. To maintain trees properly it is necessary to fumigate them once in two years. In some places it is necessary to fumigate them every year, and sometimes oftener.

### NAPA.

**MOVING WINE.**—Napa Register, Aug. 31: The California Wine Association has transferred from their cellars in Napa to those in Natoma, Placer county, about ten carloads of wine. Ten carloads more will be forwarded this coming week.

**PRUNES SMALL.**—St. Helena Star, Aug. 24: Prune gathering has commenced. The crop is large, but the fruit generally is quite small. A. L. Gibbs of Calistoga rented F. L. Alexander's drying plant at Barro Station and commenced operations Saturday. He expects to dry between 400 and 500 tons of prunes.

**GRAPE CROP.**—Calistogan, Aug. 24: Grapes are ripening slowly this cool weather, but are filling out splendidly. Picking will commence in some of the vineyards in about three weeks. The crop is going to be a fairly good one in quality and quantity.

### RIVERSIDE.

**PLUCKY GIRLS.**—Riverside Press, Aug. 28: While on an outing recently Misses Inez, Shirley and Rita Hyatt had an exciting experience and have disproved a notion that rattlesnakes cannot swim. After fishing one day, while sitting by the bank, the girls saw a huge snake glide into the water. One of the girls said it was a rattler, but the idea was derided by her sister, who insisted that rattlers didn't swim and are afraid of water. The snake swam gracefully and when he dragged his sinuous length out on the other bank a string of rattles several inches long testified to his genus. Miss Rita hastened to camp for a gun, loaded it, and sped back to the stream. The snake mounted a pile of brush and Miss Inez's shot cut the rattler in two, but the trophy of the nine rattles and button was not secured until Mr. Hyatt arrived on the scene.

### SACRAMENTO.

**HOP PICKING ALMOST FINISHED.**—Sacramento Bee, Aug. 31: Hop picking in this section of the State is almost over. The crop has not come down as heavily as the growers anticipated in the early part of the season. For instance, at Wheatland the crop, as compared with that of last year, is 45% short. Durst, who usually has 4000 bales, will have but 1700 this

year; and the Horsts, who usually have 5000 bales, will have but 2500. In Sacramento county, A. Menke, who usually has from 1200 to 1400 bales, will this year have only from 800 to 900. Last year's was a big season, and was a growing one up to the beginning of 1900. There was no killing frost, and the roots kept on growing. The climatic conditions were off for a large hop crop this year. About 50% of the hop crop of California has already been contracted for at 8½ to 11 cents. The latter price has been paid for about 350 bales for immediate shipment. Most of the growers, having sold a portion of their crops, are now holding off for better prices, which they think will prevail about the time they finish baling.

### SAN BERNARDINO.

**ORANGE SHIPMENTS.**—Redlands Citograph, Aug. 25: There have now been shipped from southern California during the present citrus fruit season, beginning October 1st, a total of 17,200 cars. Last season's shipment was 10,130 cars and the season before 14,479 cars. This is more than 6,000,000 boxes and represents over \$12,000,000 f. o. b.

### SAN DIEGO.

**APPLES NEAR THE COAST.**—Union: Accompanied by seven varieties of as handsome apples as are on exhibition at the Chamber of Commerce, was a letter from Mr. Ramsey as follows: "For the benefit of your horticultural society I send you some samples of apples, as I see in the Union a report of its last meeting at which some of the members were doubtful about apples being grown successfully close to the salt water. Now, I will leave them to judge. All of the specimens I send were grown less than half a mile from the ocean, and without irrigation, and we all know we had a very light rainfall. Many of the trees broke down, and the apples have to be thinned every year. The man who is in doubt about planting apples on the coast ought to have visited Merle and taken a look at my apples before they were picked. I know he would have gone away satisfied. I have sold over six tons this season from my little trees. I settled here a few years ago and inquired of the old timers, but got no encouragement, so went to work on my own judgment and planted out fruit. I have almost all kinds of deciduous fruits, and their success surprises me, as well as my neighbors. I have as much as a dozen kinds of apples and all bear so heavily that they have to be thinned off every year to keep the trees from breaking down. Now, if my experience is worth anything to my doubting friends, they are welcome to it. It would have been worth much to me if only one man had given me encouragement when I started, but I went at it blind."

### SANTA BARBARA.

**BEANS, WALNUTS AND LEMONS.**—Santa Barbara Press, Aug. 30: The harvesting of the Lima bean crop at Carpinteria commenced last week. The crop this year is much lighter than usual, but with the present price of \$5 per hundred a fair profit will be realized. English walnuts are dropping much earlier than usual, probably owing to the dry condition of the soil. The crop is very light. The lemon orchards of Messrs. Pithian, Higgins, McAndrews and the Shepard Bros. are doing very well, considering the shortened water supply. The quality of the fruit picked is of a high standard.

### SANTA CLARA.

**PRUNES SMALL IN SIZE.**—San Jose Mercury, Aug. 31: Prunes are not dropping as rapidly as desired, and the sun-drying process is taking much longer than usual. Reports from all portions of the valley are to the effect that the fruit is drying out excessively; that there will be a very small portion of large sizes, and that the crop, as a whole, will be far smaller than was estimated a few weeks ago.

**APRICOTS SOLD AND PEACHES OVER-ESTIMATED.**—Mercury, Sept. 1: The stock of apricots in Santa Clara valley is pretty well cleaned up, and what is left is held at prices which prohibit present sales. As the drying of peaches progresses it becomes more evident that the size of the crop has been greatly overestimated, and better prices may be looked for in the immediate future.

### SANTA CRUZ.

**DEMAND FOR NEWTOWNS.**—Watsonville Pajaronian, Aug. 30: There is a big demand for Newtowns for the European trade. Contracts have been made for a number of big lots, and at prices slightly shading \$1 per box f. o. b. Watsonville. The crop is big this year and the contracted figures assure the packer a margin. Last year the packers had difficulty in moving Newtowns, so they shipped on their own account. The bulk of the shipments went into cold storage at New York, and when sold the storage, freight and

commission charges very often made such a hole in the proceeds that the packers had very slim pickings for themselves.

**FIRST CAR OF BELLEFLEURS.**—Pajaronian, Aug. 30: The Red Pearmain will soon be ready to ship. Five cars of apples have gone out this season to Eastern points and two to Los Angeles. The first car of Bellefleurs for this season was shipped by Scurich Bros. last Saturday. The Bellefleur crop is improving daily. It shows strong in four-tier stock, its coloring is perfect and it is a top notch fruit. More than usual attention has been paid this fall to propping heavily loaded trees, but yet there is a sad showing of broken limbs in some Bellefleur apple orchards. Strong props are essential. Choice Gravensteins from Pajaro valley have been easy sellers in San Francisco during the past week at \$1.25 per box and are worth top-of-market prices. This district has never sent out a choicer showing of that variety.

### SONOMA.

**ANNUAL MEETING.**—Petaluma Courier, Aug. 29: At the annual meeting of the stockholders of the Placencia Fruit Co. F. H. Denman was elected president; H. P. Brainerd, secretary; Bank of Sonoma County, treasurer; C. E. Hutton, G. B. Murphy and Geo. P. McNear, directors. R. H. Gilman was reappointed Supt. of the fruit farms, and the board complimented his management by increasing his salary by \$300 per annum. The company reports a prosperous year.

**PRICES FOR HOP PICKING.**—Healdsburg Tribune, Aug. 30: At a meeting of hop growers held in Santa Rosa on Friday, it was decided to pay 90 cents per hundred pounds for picking hops.

**PRICE OF MILK RAISED.**—Healdsburg Tribune, Aug. 30: The local dairies will raise the price of milk on Sept. 1st to \$2 per month for one quart per day and \$1 for a pint. The price of cream will not be raised. Where customers take two quarts or more per day the price will remain unchanged. The alfalfa crop has been poor this season and the extra cost of feed is the reason for the raise.

### SUTTER.

**FIG HARVEST.**—Yuba City Farmer, Aug. 31: The fig harvest has commenced and the work of packing has started at the Rosenberg packing house. The crop will be good this season and a big pack made. Most of the growers have contracted for 2½ cents per pound.

### TULARE.

**CREAMERY REMOVED.**—Visalia Times, Aug. 30: The creamery that was moved from Woodville to the Burton neighborhood is expected to be ready for active business about October 1st.

**WILLOW TREES IN LAKE BED.**—Le-moore Leader: Thousands of young willow trees are reported springing up along the borders of old Tulare lake, where the waters have receded. So thick have these willows sprung up in some sections that men have been put to work grubbing them up on lands which have been put under cultivation.

### VENTURA.

**SUGAR MAKING.**—Santa Barbara Press, Aug. 30: The Oxnard sugar factory, which commenced this season's run on Aug. 15, is working very satisfactorily. About 1200 tons of beets are being consumed daily, and in a week more the plant will probably be running the full capacity, 2000 tons per day. The products of the Chino beet fields are being shipped to Oxnard for manufacture. Manager Drifill is quoted as saying that the percentage of sugar this year is considerably above the average, and the fields are yielding well. On the company's lands 2000 workmen are employed harvesting beets, including 650 operatives in the factory. A run of about ninety days is expected. Corrals are in process of construction, where a band of cattle will be fed on the beet pulp.

### SAN LUIS OBISPO.

**DISTRICT FAIR.**—San Luis Obispo Tribune, Aug. 27: The San Luis Obispo County Fair will be held in this city on Sept. 26, 27, 28 and 29.

### YOLO.

**GRAPES IN DEMAND.**—Woodland Mail, Aug. 28: Local grape growers are feeling good, for prices are good and buyers numerous and anxious. For the past several days buyers have been falling over each other, reaching for grapes, and with few exceptions growers have held off for better prices. Black grapes have been worth \$15 per ton for several days, and within the past few days \$15.50 has been offered. Grapes sold yesterday as high as \$16 per ton. J. R. Mitchell, representing Kohler & Van Bergen, Sacramento, has offered \$15.50 per ton. John Kincheloe, buyer for the California Winery of Sacramento, and Mr. Meyers, the local representative for Samuel Bros., have been the principal agitators.



## THE HOME CIRCLE.

## Long Ago.

I once knew all the birds that came  
And nested in our orchard trees;  
For every flower I had a name—  
My friends were woodchucks, toads and  
bees.  
I know where thrived in yonder glen  
What plants would soothe a stone-  
bruised toe—  
Oh, I was very learned then,  
But that was very long ago.  
I knew the spot upon the hill  
Where chokeberries could be found;  
I knew the rushes near the mill  
Where pickerel lay that weighed a  
pound.  
I knew the wood, the very tree,  
Where lived the poaching, saucy crow;  
And all the woods and crows knew me,  
But that was very long ago.

And, pining for the joys of youth,  
I tread the old familiar spot,  
Only to learn this solemn truth—  
I have forgotten, am forgot.  
Yet here's this youngest at my knee,  
Knows all the things I used to know;  
To think I once was wise as he—  
But that was very long ago.

I know it's folly to complain  
Of whatso'er the fates decree;  
Yet were not wishes all in vain,  
I tell you what my wish should be—  
I'd wish to be a boy again,  
Back to the friends I used to know;  
For I was, oh, so happy then—  
But that was very long ago.

—Eugene Field.

## A True Love Story.

It was a beautiful spring morning to-  
wards the end of the seventeenth century  
—the scene Germany. In a meadow  
thickly carpeted with flowers, a boy  
and girl were strolling hand in hand.  
He was about fourteen years old, and  
his dress betokened him of high birth.  
She was about a year younger and wore  
the attire of the middle class. Her face  
was one the loveliest ever seen, with her  
gentle blue eyes and the bright, fair  
hair, which fell in two long plaits down  
her back. The boy's eyes rested  
upon her with an expression of loving  
admiration, which softened down his  
usually haughty and defiant cast of  
countenance. He had twisted a hand-  
ful of field flowers into a wreath, and  
placing it upon her head, he sprang  
away laughing, to survey the effect of  
of his adornment.

"How pretty thou art, Anna!" he  
cried. "There is no other like thee  
anywhere in the wide world. When  
thou art older, thou should'st wear a  
crown of jewels instead of one of  
flowers, for thou art born to be a little  
queen!"

The little girl laughed gently and  
shook her head.

"An apothecary's daughter cannot  
become a great lady, much less a queen,"  
she said, "so I shall have to do without  
a crown and be content with my  
mother's trinkets when I grow up."

The boy drew her to him, and, bend-  
ing his head so as to be level with hers,  
whispered:

"Thou shalt be a great lady, little  
Anna Liese, for I mean, when I'm a  
man, to marry thee, and then thou'lt be  
princess of this province and have as  
many fine jewels as my lady mother.  
Does that please thee?"

"It sounds a pretty tale," laughed  
the little girl, "but thou knowest it is  
nothing but a dream. They let us play  
together and be friends because we are  
only children: but when thou art a man  
we shalt have to be strangers, and  
thou wilt marry a noble lady who will  
bring thee more wealth and lands.  
That is what princesses have to do, I  
know."

"But I shall not, Wiesgen," cried  
the boy. "I mean what I say, and who  
even now ears to cross my will? Thou  
and no other shall be my wife and  
my princess, so now thou knowest thy  
fate."

Still the little girl shook her lovely  
blonde head incredulously, and at that  
moment a man's figure appeared at  
the farther end of the field.

"See," said Anna Liese, "they come

from the castle to look for thee. We  
must say goodbye for to-day."

The boy looked angrily in the direc-  
tion of the richly attired servitor. "I  
shall not go," he said defiantly. "I  
wish to remain where I am."

"If the prince or thy mother wish to  
speak to thee, they will be angry," said  
Anna Liese, "and perhaps they will  
not let us be playmates any more. Go  
with him now," she added persuasively,  
stroking his arm and trying to smile  
away the frown that darkened his face,  
and to-morrow we can come here again.  
Go, to please me!"

"Well, then," said the boy, his lips  
relaxing into a smile as he looked down  
at her, "to please thee I will go. But  
remember, to-morrow at the same hour  
be thou here, Wiesgen. Auf wieder-  
sehen," and he kissed her pretty rosy  
lips as he spoke.

Little Anna Liese from the apothec-  
ary's shop and Prince Leopold from  
the castle had been playmates from  
early childhood. The prince was the  
only surviving son of adoring parents,  
whose indulgence had helped to foster  
a disposition already by nature wild  
and ungovernable, and there was no  
one in the wide world who could per-  
suade or guide him so well as gentle  
Anna Liese. Seeing this, and knowing  
that the little girl was a good child and  
well brought up, his mother placed no  
obstacle in their meeting together, and  
so they grew up, as one may say, side  
by side, loving each other devotedly.

But as the months and years passed  
on, and Leopold grew into a tall youth,  
Anna Liese into the fairest maid in all  
the land, the Princess Henriette began  
to see danger in this constant com-  
panionship. And her fears proved only  
too well founded. The affection of the  
boy for the little child merged imper-  
ceptibly into the passionate love of man  
for maid, and Leopold displayed an  
open admiration for Anna Liese which  
appalled his mother. He spoke of mar-  
riage—marriage with an apothecary's  
daughter! He, the reigning prince of  
the province, for his father had been  
dead for some years. At any cost, she  
told herself, a stop must be put to this  
youthful folly. In those days the "grand  
tour" was considered to give the  
finishing touch to a young gentleman's  
education. The princess decided that  
Leopold should travel; he should go to  
Italy, and amid the excitements and  
splendors of the various courts to  
which he could have access how could  
he fail to get over this mad infatuation  
for a girl so far beneath him?

The prince protested against the  
decision; he did not want to leave Ger-  
many and Anna Liese; but his mother  
managed very skillfully to overrule  
his objections, and in company with a  
young nobleman he set forth on a tour  
planned for him.

His absence lasted nearly two years,  
during which his mother hoped and be-  
lieved that her specific had been suc-  
cessful—that Leopold, among the fair  
and high-born ladies of other lands, had  
forgotten his simple German first love.

\* \* \* \* \*

The road to the castle was gayly de-  
corated with floral arches and waving  
banners, and a host of retainers and  
servants were assembled to welcome  
back the young prince.

His mother stood in the great hall  
anxiously listening for the sound of  
horses' feet which should tell her of her  
loved one's approach. Already the time  
when his arrival was expected was  
past, and still he came not. Slowly the  
minutes crept on; anxiously the mother  
waited. No princely son appeared.

In front of the apothecary's house  
in the little town below, a party of  
riders had drawn up, and the most  
brilliantly dressed among them was  
leaning from his horse, speaking words  
of passionate love and joyous greeting  
to a beautiful girl, who stood with  
flushed face and downcast eyes before  
him.

It was Prince Leopold, whose first  
thought upon reaching home was for  
his Anna Liese.

"I have seen no one to prefer to  
thee," he whispered. "Tell me, Wies-  
gen, dost thou still love me best of  
all?"

And Anna Liese's sweet blue eyes

answered for her, as she raised them a  
moment to his.

When the princess heard the reason  
of her son's tardy arrival, she was in  
despair. If nearly two years of ab-  
sence among novel and brilliant scenes  
could not cure her son, the case was  
hopeless.

Bitterly she rued her blindness  
in having allowed the old childish  
friendship to continue so long. But she  
was a woman of resources. She did not  
give up the battle; she only changed  
her tactics. Previously she had been  
loath to mention Anna Liese if she could  
help it; now, of her own accord, she  
often spoke of her, and Leopold had  
long accounts of his loved one. The  
princess, rendered desperate by the  
state of affairs, resorted to means she  
would otherwise have despised. She col-  
lected what gossip she could concerning  
Anna Liese, and retailed it in a very  
garbled form to her son. Thus the girl,  
according to these accounts, had be-  
come a practised coquette; she was  
beset with admirers and lavished smiles  
on them one and all. Latterly there  
was one whom she had seemed to favor  
more than the others—a cousin, a young  
doctor who had just returned from  
lengthy travels. To him, every one  
said, Anna Liese was sure to be be-  
trothed before very long.

The lady's tactics succeeded in their  
primary object; Leopold became fur-  
iously jealous. He did not believe the  
part about Anna Liese's coquetries  
(which was, indeed, an utter fabrica-  
tion), but the idea of any man daring to  
look with covetous eyes upon his treas-  
ure made him wild with anger.

Pretty Anna Liese, the innocent  
cause of all these heartburnings, was  
sitting one day at work beside one of  
the quaint old windows of her father's  
house. It was in the front of the dwell-  
ing, and looked out into the street, for  
which reason it was a favorite place  
with the girl, who liked to watch the  
passers by.

To her entered her cousin, Dr. Wil-  
helm, with some curious old coins and  
other articles amassed on his foreign  
travels.

"See, cousin," he said, "I have  
brought the things I promised to show  
you."

"Anna Liese put down her work and  
drew near to the young man. Their  
heads were bent very close together  
over the curiosities, and to any one  
passing in the street and chancing to  
look up, their attitude might very well  
pass for that of lovers.

As misfortune would have it, it so hap-  
pened that the princess and her son  
rode past on their way to the castle.  
Leopold's eye, of course, sought his  
loved one's dwelling, and his mother's  
gaze followed his. As her glance fell  
upon the scene in the window, her eyes  
lit up, and, touching her son's arm, she  
said:

"Look there, my son, and see for  
yourself the truth of what I told you.  
Your Anna Liese loves not you, but an-  
other!"

The effect on the passionate young  
man was tremendous, and the result  
very different from what the short-  
sighted mother had foreseen.

Uttering a cry of rage, he sprang  
from his horse and dashed into the  
house. With drawn sword, he flew up  
the stairs and into the apartment  
where the cousins were.

As Anna Liese saw her lover enter,  
sword in hand, and with a face distorted  
with passion, she uttered a terrified  
shriek, and the young doctor eyed the  
intruder with amazement.

Leopold, for the nonce quite mad,  
rushed straight at him, and the torrent  
of abuse which he poured forth, to-  
gether with his wild demeanor, left no  
doubt as against whom his hostility was  
directed.

The doctor was a man of peace, and  
timid. He turned and fled into another  
room. The prince followed him, and be-  
fore Anna Liese—who had rushed after  
them—could stay his arm he had stab-  
bed the unfortunate Wilhelm through  
the heart. The young man fell, bathed  
in blood, and Leopold, all his fury sud-  
denly abating before the dreadful sight,  
looked down horror-stricken upon the  
victim of his mad wrath, while the  
household of the apothecary, aroused by

Anna Liese's frantic cries, crowded  
round, speechless and terrified.

\* \* \* \* \*

The despair of the princess at the  
outcome of the jealousy which she her-  
self had aroused in her son can be im-  
agined. True, she had no need to fear  
for him. Prince of the land, he stood  
in too high and unassailable a position to  
be called to account for his crime; be-  
sides which, such affairs were looked  
upon with much less severity in those  
stormy times than they are now, and  
this particular unhappy matter had  
been so carefully hushed up that few  
beyond those immediately concerned  
knew all the facts of the case. What af-  
fected the princess most deeply was the  
bitter reflection that the whole terrible  
episode was of her own bringing about.  
She had known so well her son's pas-  
sionate, undisciplined nature, and, not-  
withstanding that, had played upon it  
in so dangerous a style! Too late she  
realized the tremendous power of the  
love against which she had tried to bat-  
tle, and now her dearest wish was to  
bring about that marriage which she  
had hitherto striven with all her might  
to prevent. For it seemed to her now  
that in that alone lay her son's salva-  
tion.

In was a matter which required some  
delicate handling. The apothecary's  
family, firm and deep as was their  
loyalty and affection for their prince,  
could not fail to feel both these senti-  
ments deeply shaken by his fatal act;  
and to give Anna Liese in marriage to  
the very man who had slain her  
cousin would no doubt seem to them too  
dreadful a thing to contemplate.

As for the pretty maid herself, she  
was very much in Juliet's predicament.  
She had loved her cousin, and mourned  
him deeply, but she loved his destroyer  
still more, and that love nothing was  
powerful enough to kill. How could  
she forget that his fury had all been  
born of his love for her, and who knew  
better than she, his playmate of old,  
that terrible side of his character,  
which, once brought into play, led him  
into acts for which he was hardly re-  
sponsible?

Many were the tears poor Anna  
Liese shed in the solitude and silence  
of her little chamber, both for the dead  
cousin and that still dearer one whom  
she had not seen since the fatal day,  
and whom she knew would be now suf-  
fering all the agonies of unavailing re-  
morse.

She was sitting thus, some weeks  
later, with her sad thoughts for sole  
companions, when the door opened and  
her mother with tear-stained eyes stood  
before her.

"Daughter, I have come to fetch  
thee," she said in tones that trembled.  
"The princess is down below with thy  
father, and thou art wanted."

Anna Liese turned pale.  
"The princess, mother?"

"Yes, my child!" And then the  
mother took the girl into her arms and  
her tears welled forth afresh. "She  
comes to ask thee of us for her son's  
wife," she murmured. "She says she  
was to blame for his jealousy, and be-  
seeches us to consent to the marriage.  
She told us that she sees now that  
thou alone canst guide him as he needs  
to be led and make him a good man;  
that his life, for good or evil, is in thy  
hands to make or mar."

"And you and my father—what did  
you say?" faltered Anna Liese.

Her mother gently stroked her hair  
as she answered:

"Thy father said at last that thine  
own heart should decide, my child. It  
may be that the princess is right, and  
that thou art the one pointed out by  
heaven to be this man's good angel. If  
that is so, we have no right to withhold  
his salvation. God, who is so great  
and wise, knows what is for the best,  
and He will guide thee the right way,  
my child."

Leopold, meanwhile, was sitting  
brooding all alone in one of the great  
massively furnished rooms of the castle.  
It was getting dark very rapidly, but  
he did not notice the increasing gloom;  
it accorded but too well with the dark-  
ness of his mind. His head was sunk  
forward on his breast, his eyes were  
fixed on vacancy, while all manner of



tormenting reflections were surging through his brain. And the chief of these, which kept ever recurring was, that by his own hand he had placed a barrier between his love and himself forever. For she, the gentle, peace loving maiden, would surely never forgive such an act as his! No, this pretty Anna Liese, his darling Wiesgen, as he had been wont to call her, was lost to him forever. Bitter tears welled to his eyes, and he cursed his mad and fatal impulse for the thousandth time.

At that moment the door behind him opened noiselessly, light footsteps glided across the polished floor, and some one came and stood beside him. And looking up he saw with wondering eyes his love, his Anna Liese, more beautiful than he had ever yet beheld her, with tears, half of sadness, half of joy, in the tender eyes that gazed upon him. Then, even as he sat, speechless and bewildered, half doubting his own eyes, his mother glided up to him and placed his sweetheart's hand in his.

Though this true story happened in times far from idyllic, and the prince was by nature far from an ideal hero of romance, one might well end the narrative of his wooing with the old finale of the fairy tales: "They lived happily ever after," for Leopold and his wife, from the time they were wedded till Anna Liese's death, forty-seven years later, were lovers to the last.

Nearly two hundred years have passed since the day when pretty Anna Liese became the great lady of her native land, but the names of both maid and lover still linger in the pages of German history, for the prince was Leopold Furst von Anhalt Dessau, famous in Prussian annals as "der alte Dessauer," the general who fought as a young man under Ercidrich Wilhelm of Brandenburg, the Great Elector, and as an old one under Frederick the Great himself, and who, for a period of nearly half a century, stood out conspicuously as one the greatest soldiers of that day.

The memory of Anna Liese Fosc is still held in honor in her native province. For she showed herself well worthy to fill the exalted position to which she was raised. She knew just how to manage her rough and self-willed lord, and to use her influence for the good of the people. Well acquainted with the wants and necessities of the Dessau province, she held the reins of government during the prince's enforced absence in the wars wisely and well, and, risen herself from the people, succeeded in winning in the highest degree their loyalty and love.

And thus across the rough soldier's life of the old Dessauer, with its constant turmoil and its clash of arms, there shines one ray of pure golden light—his love for Anna Liese.—Argosy.

#### Bad Manners and Push.

It seems a trifle unjust to the clever and well-bred American girl to dwell upon a familiar type so much in evidence as to overshadow all the others and pass everywhere as representative, but it is a question of tendencies. This typical girl of the day puts on mannish airs with mannish clothes, spices her talk with slang, not always of the choicest, tosses her pretty head in proud defiance as she puts down her parents, her elders and her superiors—indeed, she admits no superiors, though this scion of equality does admit inferiors, and snubs them without mercy—pronounces a final opinion on subjects of which she does not even know the alphabet, shows neither respect for white hair nor consideration for favors, which she claims as a right, and calls all this "swell," or "smart," and a proper expression of her fashionable—or unfashionable— independence. The same spirit runs through the entire social gamut. There is nothing more contagious than bad manners; it is so easy for the selfish instincts to come uppermost when the pressure of a law, written or unwritten, is removed. The insolence of servants is sufficiently emphasized. Even the shop girl waits upon you with half-disguised impertinence, often impertinence without any disguise, and replies to your civil word

with a lofty stare, as much as to say, "Since you are polite to me, you cannot be of much consequence." The causes are not far to seek. A potent one is the rush and hurry of life, in which everybody is intent upon doing the most in the least possible time. There is no leisure for small courtesies. It is a heterogeneous scramble for the loaves and fishes, in which the survival of the fittest resolves itself into a survival of the strongest. It is something akin to brute force that gains the prize, whether it be a seat in the car or a seat in Congress. Indeed, we claim, as a part of our national glory, the trait so well expressed by the word "push."—Century.

#### A Shadow of the Rockies.

The mountains from my window lie out-rolled,  
Their solemn peaks with coronals of snow  
O'er which the fires of dawn and sunset flow,  
And keen, high ridges by fierce winds patrolled.  
With evening comes a mighty shadow cold  
Across my doorway as the sun sinks low,  
And, high above, the loftier summits show  
Faint, as the twilight tames their outlines bold.  
Then from the heights the spirit of repose  
Steals earthward, with the peace that long has lain  
Secure amid the deep, untrodden snows,  
A shadow stream, for which my soul is fain,  
That from the towering peak of silence flows,  
And pours its balm upon the toiling plain.

—Century.

#### An Oriental Point of View.

That the Chinaman places his surname first, while the American has his last; that the Chinaman wears white for mourning, and the American black; that the Chinese women have big waists and little feet, while the American women have little waists and big feet; that the Chinaman sits in a draft as a matter of preference, while the American avoids it; that one eats with chopsticks and spoons, the other with knife and fork—these and a hundred other insignificant contrasts in the customs of every-day life indicate the kind of observations I am naturally making during my sojourn in the United States, stated Hon. Wu Ting-fang. But I realize that this antithesis is only skin deep. Human nature is the same in both cases, but expresses itself differently.—Frank Leslie's Monthly.

THERE is a home in Tokio, Japan, where five generations live under the same roof. The family is that of Mr. Kinyemon Arai of Matsunoki, Unemura, Gumma prefecture, who has just entered on his ninety-third year and is still hale and hearty. So is his wife Naka, who is of the same venerable age. Equally healthy and prosperous are their eldest son, Kakunosuke and his spouse, who are respectively sixty-eight and sixty-seven years old. Then comes their grandson, Kennosuke, forty-six years old, and his wife Asa, younger by two years. Twenty-six and twenty-four are the ages of their great-grandson, Isematsu and his life partner Toki, respectively, from whose union have sprung a healthy, growing boy of four and a baby girl.

LIFE is too short to waste  
In critic peep or cynic bark,  
Quarrel or reprimand.  
'Twill soon be dark;  
Up! Mind thine own aim, and  
God speed the mark!

THE man without a purpose is like a ship without a rudder—a waif, a nothing, a no man. Have a purpose in life, and, having it, throw such strength of mind and muscle into your work as God has given you.—Carlyle.

NOTHING is truer in the experience of life than that selfishness overreaches itself. He that would get the most out of life must contribute of his thought, sympathy, time and substance for the good of others.—Lucien C. Warner.

## DOMESTIC ECONOMY.

### Hints to Housekeepers.

Vinegar and salt will strengthen a lame back.

Vinegar for soaking lamp wicks makes a brilliant light.

Vinegar used to wash the wall before papering will help the paper to stick.

A salad of pears and peaches is excellent with whipped cream and sugar between the layers.

Mix stove blacking with soapy water. This will prevent the dust from flying, and will also produce a finer polish.

To have a custard pie of an even, nice brown when baked, sprinkle a little sugar over the top just before putting into the oven.

When stoning raisins rub a little butter on the fingers and knife. It will relieve the task of raisin seeding of its stickiness and discomfort.

A large pineapple, the inside of which has been scooped out, leaving a wall, sweetened and returned to the shell is delicious for a picnic dessert. A tall, narrow box can be found to fit it, and this, too, should be kept right side up.

Lard or grease of some kind is usually advised to remove tar from clothing, but benzine is thoroughly effectual, and it is much cleaner. When used on woolen or other washable material, the article may be thoroughly washed in warm soapsuds afterwards.

Bacon should rarely be left off the breakfast menu. It is the finest relish accompaniment to other meat dishes, and alone it covers the breakfast meat item if accompanied by such things as fried tomatoes, an egg dish plain or elaborate, or something of that character.

To fry tomatoes, put two tablespoonfuls of butter in a frying pan and add to it a tablespoonful of finely chopped onion. Cook the onion until it is yellow and remove it. Cut the tomatoes in halves, let a little of the juice run from them, place them in the pan, and cook for five minutes. Turn them and cook them five minutes longer.

A pinch of salt added to mustard when mixing will keep it of a better color. Wet the mustard first with a little vinegar, then mix it with warm water. It can be made thinner than when cold water is used, and is thus more convenient to put into the mustard pot, while it stiffens sufficiently as it cools. Watery mustard is an abomination.

Nothing responds to rich cream with more appreciative flavor than succotash. It is best made of kidney or lima beans, but string beans can be used. Corn and beans should be cooked separately. The water in which the corn is cooked should be saved, but not that in which the beans were boiled. Equal parts of corn and beans should be used.

A plum and peach salad is a fit present day accompaniment for a luncheon, or may be used for breakfast. For the purpose the large egg plums are the best. To a dozen of the plums use a half dozen peaches. Pare them and arrange them in a glass dish in alternate layers, sprinkling powdered sugar between. They should stand on the ice for half an hour before serving.

Junket is an old-fashioned dish that is delicate enough for a weak stomach, and is useful where a light dessert is wanted, especially for children. In making it, stir with a pint of lukewarm milk four tablespoonfuls of sugar, and when it is dissolved add two teaspoonfuls of liquid rennet, and turn the mixture into a mould that has been previously wet with cold water. Stand in a cold place until it is set, and serve with cream.

The trouble with bread not keeping is sometimes due not so much to the jar or pail as to its not being sufficiently baked, especially if the loaves are very thick. It may look done and there will be no appearance of underdone dough, but yet it would have been safer to let it remain in the oven longer, safely covered, to prevent burning. The

writer has used a tin pail for several years, and likes it, but she wraps her break in clean, soft brown paper and keeps it secure from the air even in the tin pail. It keeps without any sign of mold for several days.

Midsummer menus should be the very antithesis of winter ones, all heating, stimulating foods giving place to that splendid variety of health-giving good things which the season brings to us. Three months of vegetarianism would do every one good, but since we are not all inclined to such radical changes there is left to us the sensible change to lighter meats, which proves as delightful as beneficial. Lamb, veal, poultry, boiled and broiled ham, bacon and, above all, fish, give a wide range of choice.

### Domestic Hints.

PEACH ICE CREAM.—Peach ice cream is delicate and, if properly made, will not be in the least insipid. Put one quart of cream on to boil with one pound of sugar. When the sugar is dissolved add one pint of rich milk and, when cold, freeze. Pare one quart and one pint of large, ripe peaches, mash, and stir into the ice cream when nearly frozen. Finish the freezing and pack.

PEACH FOAM.—Pare and cut up half a dozen peaches, strain through a sieve and mix the pulp with powdered sugar, enough to sweeten. Beat the whites of three eggs to a stiff froth, add it to the peach pulp and beat until thick, smooth and velvety. Pour into a mold, which must be placed on ice. Serve with sweetened, whipped, a plain, thick, "double" cream, and petits fours. Peach foam can be made of canned peaches.

LEMON ICE CREAM.—Lemon ice cream is a good old-fashioned kind which our grandmothers used to make, and this was their recipe: Mix together the juice and rind of two lemons, the juice of a large orange, and three-fourths of a pound of sugar, letting them stand in a cool place an hour and a half to blend. Meanwhile put on the fire one quart of cream, scald, and then set away to cool. Then freeze to a mush, after which beat in the sugar and lemon juice, and finish the freezing.

BAKED PEARS.—Peel as many pears as you wish to serve, leaving on the stem. Make a syrup of two cupfuls of sugar, then place the pears in the syrup to cook until fairly tender, but not soft enough to break; remove the pears to a dish to cool, and boil down the syrup with a lemon sliced thin in it, to flavor it. Cook five minutes. Arrange the pears in a dish, with the sliced lemon around the edge, and pour the syrup over. If allowed to cool a little, it can be served in a glass dish.

BAKED HAMBURG STEAK.—One and one-half pounds raw chopped beef, two cupfuls of stale bread softened with half a cupful of hot milk and cooled, two eggs, small onion minced, teaspoonful of salt, saltspoonful of pepper and pinch of ginger. Mix well and shape into squares; place in baking pan with a tablespoonful of tomato, small onion and butter the size of a walnut on top of meat. Bake one hour, basting frequently. The potatoes should be boiled fifteen minutes, then drained, pared and placed in pan with the hamburger steak to cook forty-five minutes, being turned and basted often. Medium-sized potatoes are best for this. Serve arranged around the meat.

TOMATO BISQUE.—One quart of milk to one-half can of tomatoes, two tablespoonfuls of butter, one of flour or cornstarch, salt and pepper to taste, and as much soda as will cover the tip of a knifeblade. Cook the tomatoes very soft and rub through a strainer. Add the soda; when it is done foaming, add the butter bit by bit, to prevent the soup becoming oily. A dash of red pepper or paprika gives it spirit. Scald the milk for about ten minutes, adding the flour or corn starch, which has been mixed with a little cold milk to make it smooth. When the corn starch is cooked, pour the milk and tomatoes together and beat well. Do not mix together till about to serve, for this will prevent its curdling.



## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Sept. 5, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Sept.	Oct.
Wednesday.....	74½@75½	75 @76
Thursday.....	75½@74½	76½@75½
Friday.....	74½@73½	75½@74½
Saturday.....	75 @75½	76½@76
Monday.....	—@—	—@—
Tuesday.....	74½@73½	75½@74½

\*Holiday.

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Rod Winton per cental in Liverpool were as follows for the week:

	Sept.	Dec.
Wednesday.....	6s 0¼d	6s 2¼d
Thursday.....	6s 0¼d	6s 2¼d
Friday.....	6s 0¼d	6s 2¼d
Saturday.....	6s 0¼d	6s 2¼d
Monday.....	5s 11¼d	6s 2¼d
Tuesday.....	5s 11¼d	6s 2¼d

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec., 1900.	May, 1901.
Thursday.....	1 11¼@1 10¼	1 16¼@1 15¼
Friday.....	1 10 @1 10¼	1 15 @—
Saturday.....	1 10¼@1 11¼	—@—
Monday.....	—@—	—@—
Tuesday.....	1 10¼@1 09¼	—@—
Wednesday.....	1 10 @1 09¼	—@—

\*Holiday.

## WHEAT.

The Wheat market has not shown any pronounced trend either upward or downward since last review. Options slid downward several points immediately following close of last week's report, but by Saturday had almost recovered the loss of the two preceding days. Spot values in the meantime were without appreciable change, the movement in actual Wheat, both for export and local milling account, continuing light. But seven clearances of Wheat were made from this port in August, and most of these were only part cargoes. Total Wheat shipments from here last month aggregated only 11,256 tons, valued at \$278,620. This is almost identical with the exports for August, 1899, which footed up 12,613 tons, with a valuation of \$273,200. English markets have been showing a little more firmness, but shipowners have been contending for an advance in freight rates to more than offset the improvement abroad. The latest spot charter reported was at £2 per ton for an iron ship to Europe, usual option, being an advance of about 1s. 9d., or nearly 50 cents per ton, over the figures which had been current. Monday was a national holiday and nothing was done in grain circles. The market yesterday showed much the same quiet and easy tone as most of the previous week. Eastern markets to-day were slow and weak, and there was a lack of firmness here.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, \$1.11¼@1.09¼.  
May, 1901, delivery, \$1.16¼@1.15.  
Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at \$1.10@1.09¼; May, 1901, \$—@—.

California Milling.....	\$1 07¼@1 10
Cal. No. 1 shipping, alongside.....	1 05 @1 06¼
Oregon Valley.....	1 05 @1 06¼
Washington Blue Stem.....	1 05 @1 10
Washington Club.....	1 02¼@1 05
Of qualities wheat.....	1 00 @1 02¼

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-1900.	1900-01.
Liv. quotations.....	6s0¼d@6s1¼d	6s4¼d@6s5d
Freight rates.....	35@—s	40@—s
Local market.....	\$1 05@1 07¼	\$1 05@1 07¼

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## LOCAL STOCKS OF GRAIN.

Stocks of grain in Call Board warehouses on August 1st and Sept. 1st:

Tons—	Aug. 1st.	Sept. 1st.
Wheat.....	127,165	*177,171
Barley.....	57,274	†82,053
Oats.....	4,525	6,218
Corn.....	263	197

\*Including 108,060 tons at Port Costa, 68,264 tons at Stockton.

†Including 48,032 tons at Port Costa, 20,764 tons at Stockton.

Stocks of wheat in Call Board warehouses on 1st inst. show an increase of 50,006 tons for the month of August. A year ago there were 149,316 tons wheat in Call Board warehouses.

## FLOUR.

There is little life being displayed in this market, and absence of firmness re-

mains fully as pronounced a feature as for some time past. Quotable values are unaltered, but transfers at full current quotations are the exception rather than the rule, especially in other than a small way, or of best and most favorably known brands.

Superfine, lower grades.....	\$2 25@2 50
Superfine, good to choice.....	2 60@2 80
Country grades, extras.....	3 15@3 40
Choice and extra choice.....	3 40@3 65
Fancy brands, jobbing.....	3 60@3 75
Oregon, Bakers' extra.....	2 90@3 25
Washington, Bakers' extra.....	2 90@3 40

## BARLEY.

The market has not deviated to any noteworthy degree from conditions of preceding week. Choice to select Brewing or Chevalier, desirable for shipment, was salable to tolerably fair advantage, but for all barley which would not rank above feed the market was slow and weak. A shipment of 930 tons brewing barley was made the past week per sailing vessel to Belgium. The British ship Kinross-shire, clearing for Hull, England, took 3080 tons barley, valued at \$54,000. The ship Robert Fernie, bound for England, carried 3000 tons barley, value \$60,000. Several of the ships now loading for Europe are taking barley as main or part cargo.

Feed, No. 1 to choice.....	70 @ 72¼
Feed, fair to good.....	65 @ 67¼
Brewing, No. 1 to choice.....	80 @ 85
Chevalier, No. 1 to choice.....	97¼@1 02¼
Chevalier, No. 2.....	85 @ 90
Chevalier, poor.....	70 @ 75

## OATS.

The advanced figures recently established for oats of all descriptions have caused the market to rule more quiet. Holders have been depending principally on Government orders for an outlet at the higher prices demanded, but it remains to be seen whether the Government will continue purchasing here or will endeavor to obtain more favorable terms elsewhere. Stocks are showing slight increase, but are still mainly colored varieties.

White Oats, fancy feed.....	1 35 @1 40
White, good to choice.....	1 25 @1 30
White, poor to fair.....	1 15 @1 22¼
Gray, common to choice.....	1 15 @1 25
Milling.....	1 30 @1 45
Surprise, good to choice.....	1 30 @1 45
Black Russian.....	1 10 @1 25
Red.....	1 12¼@1 30

## CORN.

There is little arriving from any quarter, and stocks in store and warehouse in this center are of light volume. Last quoted values continue to be well maintained. Owing to the limited supplies, business is in the main necessarily of a light jobbing character.

Large White, good to choice.....	1 22¼@1 25
Large Yellow.....	1 20 @1 22¼
Small Yellow.....	1 50 @—
Eastern, in bulk (carload lots).....	1 15 @1 17¼

## RYE.

Stocks show some reduction, but prices are without improvement. A sailing vessel, clearing the past week for Belgium, took 49,240 centals of this cereal, valued at \$44,316.

Good to choice, new.....	90 @ 92¼
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## BUCKWHEAT.

Values are wholly nominal, the market being bare. Quotations are based on latest reported transactions.

Good to choice.....	1 90 @2 00
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## BEANS.

Aside from Horse Beans, the arrivals of new crop thus far have been almost wholly Lady Washingtons, and receipts of these have not been heavy. Other varieties are expected to arrive in quotable quantity at an early date. The market has an unsettled tone, with tendency to easier rates. That buyers will succeed in depressing values to any marked extent is not, however, very probable. Carry-over stocks are mainly Lady Washingtons, Bayos and Pinks.

Pea, fair to good, 100 lbs.....	—@—
Small White, good to choice.....	3 75 @4 00
Lady Washington.....	2 40 @2 75
Pinks.....	2 40 @2 65
Bayos, good to choice.....	2 40 @2 65
Reds.....	3 00 @3 50
Limas, good to choice.....	5 15 @5 25
Black-eye Beans.....	2 75 @3 25
Horse Beans.....	1 75 @2 25
Garbanzos, large.....	2 00 @2 25
Garbanzos, small.....	1 25 @1 75

Advices by recent mail from New York give the following review of the bean market, prices quoted being per 60-lb. bushel:

The market has been more active and advancing on most varieties, though buyers have resisted paying the higher rates, and the volume of business has been small. Marrow have worked up about 10c., recent sales making at \$2.15. Choice Pea have remained at \$2.05, with very little business reported, as holders have asked \$2.10 and buyers have not wanted stock badly enough to pay latter figure; just at the close, however, some small sales reported at \$2.10, but the price is extreme

and not well established as yet. Medium have strengthened further in sympathy with Pea, buyers preferring to take Medium rather than pay \$2.10 for Pea, but tone not very strong at the close. White Kidney in fair supply and held steadily, occasionally above quotations. First of the week Red Kidney were held with much more confidence, holders generally asking \$1.85; available offerings were so light that if any export demand had developed that figure would doubtless have been established; but, as the week advanced and exporters showed no interest, tone became weaker, and of late \$1.80 has been full. Black Turtle Soup have had more inquiry and have advanced fully 5c. Other beans without material change, though Lima have a weaker undertone, in view of more stock in transit; quoted at \$3.52½@3.55. Foreign beans have met a good outlet at well sustained prices. Reports from the West have been unfavorable regarding the outlook for the crop of peas, and, with higher prices prevailing there, market has strengthened in sympathy.

## DRIED PEAS.

Firmness continues the prominent feature of the market for both varieties, but more especially for choice Green or Blue peas, with few offering and no likelihood of the market being surfeited this season.

Green Peas, California.....	2 40 @2 50
Niles Peas.....	2 15 @2 25

## WOOL.

There has been nothing of consequence done in the local market the past week. Advices from the East have been of a discouraging character, and with dullness prevailing there, it is natural that trade here should be at a standstill. Buyers give as the cause of the inactivity the unsettled political conditions always attendant upon the eve of a presidential election.

## SPRING.

Humboldt and Mendocino.....	16 @18
Northern, free.....	14 @16
Northern, defective.....	11 @13
Middle Counties, free.....	14 @16
Middle Counties, defective.....	11 @13
Southern Mountain, 12 mos.....	8 @10
Southern Mountain, free, 7 mos.....	9 @11
Southern Mountain, defective, 7 mos.....	8 @10
Oregon Valley, fine.....	17 @19
Oregon Valley, coarse to medium.....	16 @17
Eastern Oregon, choice.....	15 @16
Eastern Oregon, fair to good.....	11 @14
Nevada, as to condition.....	14 @16

## FALL.

San Joaquin.....	7¼@10
San Joaquin Lambs.....	8 @9

## HOPS.

While picking and curing are in progress in most sections of this State, there have been no noteworthy arrivals up to date. The crop is turning out decidedly short in most localities in California, and that the yield in Oregon and Washington will be equal to that of last season is not probable. Advices from Europe indicate a marked reduction in the crop abroad. While there is no quotable improvement to record in prices, most of the growers on this coast are holding off, in anticipation of a better market.

Good to choice, 1900 crop..... 10 @12

The following concerning the hop market comes through by recent date from a New York authority:

While there is comparatively little trading, the market is considered in good healthy shape, with outlook favorable, and prices are held firmly and with confidence. Some inquiries are noted, and no doubt considerable business could be done on the basis of prices talked a few weeks ago. Brewers are not showing much interest at the moment. Crop reports from this State continue good, and it now begins to look as if we would have as many hops as last year. We hear that some imprudent growers are commencing to pick their Humphreys, which, in the opinion of the trade, is thought to be too early. We would again caution State growers not to be in any too great hurry to pick before the hops are well ripened, and also to pick clean and avoid the troubles of last year's crop, which was the dirtiest on record. Reports from the Pacific coast, more especially from Oregon, are all that could be desired, and growers at the time being are unwilling to name a price for the new crop. Reports from Washington and California are unchanged. By a typographical error in last week's report, the English crop was said to be estimated two-thirds less than last year, but it should have read one-third loss. Latest English advices are not as good, and the maximum estimates do not place the yield over £200,000 old duty, and some authorities claim even less, as against £330,000 old duty last year.

## HAY AND STRAW.

With arrivals of hay showing considerable reduction, as compared with some weeks preceding, and previous accumulations tolerably well out of the way, the market is presenting a better tone, and especially for choice hay are current val-

ues being well sustained. Straw is in fair demand, with prices steady.

Wheat.....	8 00@12 00
Wheat and Oat.....	8 00@11 00
Oat.....	7 00@10 00
Barley.....	5 50@8 50
Volunteer.....	4 50@6 00
Alfalfa.....	6 00@7 50
Stock.....	5 00@6 50
Compressed.....	8 00@12 00
Straw, ½ bale.....	25 @37¼

## MILLSTUFFS.

Prices for all descriptions of millstuffs quoted herewith remained at much the same levels as preceding week, with the general tone rather easy than otherwise for all kinds except Bran and Milled Corn.

Bran, ½ lon.....	12 50@13 00
Middlings.....	15 00@18 00
Sboris Oregon.....	13 00@15 00
Barley, Rolled.....	16 00@16 50
Cornmeal.....	25 00@25 50
Cracked Corn.....	26 50@27 00

## SEEDS.

Mustard Seed is in light spot supply, and is not offering freely to arrive. Holders are quite firm in their views, and that the market will develop any special weakness later on is certainly not now foreshadowed. Trading in Bird Seed is of light volume and at generally unchanged rates.

Mustard, Trieste.....	3 50@—
Mustard, Yellow.....	4 50@—
Flax.....	2 00@2 50

Canary.....	3¼@4
Rape.....	2 @3
Hemp.....	3¼@4

## BAGS AND BAGGING.

There is a little doing in Fruit Sacks at notably unchanged values, and occasional orders are being filled for Wool Bags, on account of Fall clip, at practically same rates as have been current throughout the season. Beyond this there is virtually no business, the Grain Bag market being lifeless.

Calcutta Grain Bags, buyer June-July.....	—@—
Calcutta Grain Bags, spot.....	5¼@—
San Francisco Grain Bags, 22x36, spot.....	5¼@—
State Prison Bags in lots of 200, ½ 100.....	5 65@—
Wool Sacks, 4 lbs.....	—@32¼
Wool Sacks, 3½ lbs.....	—@28¼
Fleece Twine.....	7¼@—
Gunnies.....	—@12¼
Bean Bags.....	4¼@5¼
Fruit Sacks, cotton.....	6¼@7¼

## HIDES, PELTS AND TALLOW.

No improvement to record, and none anticipated in the near future, in quotable values or the general condition of the Hide and Pelt market. Tallow is not accumulating to any noteworthy extent, demand being fair at current rates.

## HONEY.

Market is not burdened with offerings of honey of any description, and especially is the product of the White Sage blossom in exceedingly limited stock, the latter being sought after at stiff figures. All kinds are meeting with a firm market, even dark grades being readily salable.

Extracted, White Liquid.....	7¼@8
Extracted, Light Amber.....	6¼@7¼
Extracted, Amber.....	5¼@6¼
White Comb, 1 lb frames.....	12¼@13¼
Amber Comb.....	11¼@12¼
Dark Comb.....	7¼@9

## BEESWAX.

Stocks are very limited, and demand continues as good as previously noted. Market is firm at quotations.

Good to choice, light, ½ lb.....	26 @28
Dark.....	24 @25

## LIVE STOCK AND MEATS.

Market for Beef has shown steadiness, offerings proving just about sufficient for immediate demand. Mutton is selling at a wider range than ordinarily, old and heavy sheep not being sought after. Lamb is inclining downward in price as the stock increases in weight. Veal offering is mostly large; prices are notably unchanged. Hog market shows steadiness, but not many are required to satisfy the demand at current rates.

Beef, first quality, dressed, net ½ lb.....	6 @—
Beef, second quality.....	5 ½@—
Beef, third quality.....	5 @—
Mutton—ewes, 6½@7c; wethers.....	6¼@7¼
Hogs, bard grain fed, medium.....	5¼@6
Hogs, small, fat.....	5¼@6
Hogs, large, bard.....	5¼@—
Hogs, feeders.....	5¼@5½
Hogs, country dressed.....	6 @6¼
Veal, small, ½ lb.....	8 @10
Veal, large, ½ lb.....	8 @—
Lamb, spring, ½ lb.....	8 @8¼

## POULTRY.

Large and fat chickens were in fair request, but for small stock the market was weak and low, owing to heavy arrivals of Eastern. Turkeys, Ducks and Geese went at generally unchanged rates, with no particular firmness to record in market for either sort.

Turkeys, live hens, ½ lb.....	11 @12
Turkeys, live gobblers, ½ lb.....	9 @10
Hens, California, ½ dozen.....	4 00 @5 00
Roosters, old.....	3 50 @4 50



Roosters, young (full-grown).....	3 50	@ 5 00
Fryers.....	3 00	@ 3 50
Broilers, large.....	2 75	@ 3 25
Broilers, small.....	2 00	@ 2 50
Ducks, old, per dozen.....	3 50	@ 4 50
Ducks, young, per dozen.....	3 50	@ 4 50
Geese, per pair.....	1 25	@ 1 50
Goslings, per pair.....	1 50	@ 1 75
Pigeons, old, per dozen.....	1 50	@ 1 75
Pigeons, young.....	1 50	@ 1 75

## BUTTER.

A weak butter market has been experienced since last review, especially for other than most select qualities of fresh, the latter being in rather light stock, while defective qualities were in tolerably heavy supply. As retailers are now running on held and packed butter, the inquiry for fresh was almost wholly for the very best.

Creamery, extras, per lb.....	23 1/2 @
Creamery, firsts.....	22 @ 23
Creamery, seconds.....	21 @ 22
Dairy, select.....	22 @
Dairy, seconds.....	18 @ 20
Dairy, soft and weedy.....	— @
Mixed store.....	15 @ 16
Creamery in tubs.....	20 @ 22
Pickled Roll.....	20 @ 21
Parkin, California, choice to select.....	20 @ 21
Parkin, common to fair.....	17 @ 18

## CHEESE.

While there is no scarcity of supplies of domestic product, either regular flats or small sizes, the market is moderately firm at the figures quoted, the volume of business being of fair proportions. Imported cheese is in limited stock and best qualities are being steadily held.

California, fancy flat, new.....	10 @
California, good to choice.....	9 @ 9 1/2
California, fair to good.....	8 1/2 @ 9
California Cheddar.....	— @
California, "Young Americas".....	9 1/2 @ 11

## EGGS.

Choice to select fresh are quotably higher, under limited offerings, and are apt to rule still more favorably to sellers in the near future. For off qualities, however, the market shows no firmness. There are heavy supplies of cold storage and Eastern eggs, which are being offered at comparatively easy figures.

California, select, large, white and fresh.....	28 @
California, select, irregular color & size.....	23 @ 26
California, good to choice store.....	16 @ 19
Eastern, as to section and grading.....	16 @ 20
Eastern, cold storage.....	— @

## VEGETABLES.

No radical changes have been developed in this market during the week under review. Onions were in more active demand and prices averaged better than for several weeks preceding. Tomatoes, Squash and Cucumbers continued in liberal receipt and went at easy figures. Offerings of Corn were mostly under choice. Peas and Beans sold at a rather wide range, with market firm for select and weak for common qualities.

Beans, String, per lb.....	2 @ 3
Beans, Wax, per lb.....	2 @ 3
Beans, Lima, per lb.....	2 1/2 @ 3 1/2
Cabbage, choice garden, per 100 lbs.....	1 00 @ 1 25
Cauliflower, per dozen.....	50 @
Cucumbers, Bay, per box.....	20 @ 35
Egg Plant, per box.....	40 @ 65
Garlic, per lb.....	2 @ 3
Green Corn, per sack.....	75 @ 1 25
Green Corn, Alameda, per crate.....	1 25 @ 1 50
Onions, Yellow Danver, per cental.....	55 @ 65
Okra, Green, per box.....	30 @ 60
Peas, Sweet, garden, per lb.....	2 @ 3
Peppers, Green Chile, per box.....	30 @ 60
Peppers, Bell, per lb.....	35 @ 65
Pickle Cucumbers, No. 1, per cental.....	75 @ 1 00
Pickle Cucumbers, No. 2, per cental.....	40 @ 65
Squash, Summer, per large box.....	30 @ 40
Tomatoes, River, per large box.....	25 @ 40

## POTATOES.

There were tolerably heavy shipments

of potatoes, and in consequence the market presented a little better tone, although quotable rates remained much as last noted. One large handler shipped eleven carloads to Texas in one day. For desirable stock values were quite well sustained at current range, but for common qualities firmness was lacking. Sweet potatoes were in more than ample supply for immediate requirements, and market inclined in favor of consumers.

Burbanks, River, per cental.....	40 @ 60
Burbanks, Salinas, per cental.....	70 @ 1 00
Sweet Potatoes, Yellow, per cental.....	1 25 @ 1 85

## The Fruit Market.

## FRESH FRUITS.

For desirable qualities of most kinds now arriving the market was moderately firm, especially for tree fruit and berries. Bartlett Pears of high grade were scarce and in active request; such as were large, clean and in every way sound, were salable to special custom at an advance on quotations. Peaches of choice to select quality were not in excessive supply and brought fully as good average prices as preceding week. Plums sold at about same range as last quoted, with fair demand for large sizes and select qualities at prevailing rates. Apples of ordinary sorts were in quite liberal supply, as compared with demand for this description, but choice of desirable varieties, large, sound and free from worms, were in very limited receipt and salable to advantage, in some instances above quotable rates. Grapes arrived rather freely, with market easy in tone for most descriptions, Isabella and Seedless proving about the only exceptions. Berries arrived sparingly and as a rule sold to fair advantage. Melons were favored with a good demand most of the week, with prices in the main steady.

Apples, fancy, 4-tier box.....	1 00 @ 1 25
Apples, good to choice, per 50-lb box.....	60 @ 90
Apples, common to fair, per 50-lb box.....	25 @ 50
Apples, Crab, per box.....	30 @ 60
Blackberries, per chest.....	3 50 @ 6 00
Cantaloupes, per crate.....	50 @ 1 00
Figs, per 1-layer box.....	25 @ 50
Figs, per 2-layer box.....	40 @ 75
Grapes, Tokay, per box.....	35 @ 60
Grapes, Seedless Sultan, per crate.....	85 @ 1 00
Grapes, Isabella, per crate.....	50 @ 90
Grapes, Rose of Peru, per box.....	35 @ 50
Grapes, Black Hamburg, per box.....	35 @ 50
Grapes, Zinfandel, per ton.....	19 00 @ 23 00
Grapes, Muscat, per box.....	35 @ 50
Raspberries, per chest.....	5 00 @ 8 00
Nectarines, Red, per box.....	60 @ 75
Nectarines, White, per box.....	40 @ 65
Nutmeg Melons, per crate.....	30 @ 60
Plums, ordinary varieties, per box.....	20 @ 35
Plums, fancy, per box.....	50 @ 60
Prunes, per crate.....	30 @ 50
Plums, as to size, per ton.....	7 00 @ 15 00
Peaches, per box.....	35 @ 60
Peaches, wrapped, per box.....	65 @ 75
Peaches, Cling, per ton.....	17 50 @ 25 00
Peaches, Freestone, per ton.....	17 50 @ 25 00
Pears, Bartlett, per box.....	40 @ 1 00
Pears, Bartlett, per ton.....	15 00 @ 25 00
Pears, common kinds, per box.....	25 @ 65
Pomegranates, per box.....	50 @ 75
Strawberries, Longworth, per chest.....	5 00 @ 8 00
Strawberries, Large, per chest.....	3 50 @ 6 00
Whortleberries, per lb.....	3 @ 5
Watermelons, per 100.....	6 00 @ 17 00

## DRIED FRUITS.

Market for cured and evaporated fruits has not shown much life the current week, quotable values for most kinds which have been coming forward remaining practically as last noted, with market firm in tone for Apricots, fairly steady for Peaches, not very well defined for Pears and Plums, and unsettled for Figs, the latter being held in most instances above the views of buyers. Evaporated Apples are ruling quiet, but spot stocks are quite light. Interest this week has been mainly centered on Prunes, prices for which have been announced by the California Cured Fruit Association, and which are given below. The range is from 7c. for 40-50s to 2c. for 100-120s. The four sizes are quoted at 3c. for Santa Claras, 2 1/2c. for Sonomas and 2 1/2c. for other districts. While the prices for the four sizes are far from high, they look at first glance, all things considered, to be tolerably fair for the grower, but when sifted down to a net cash basis, or what the producers will really realize, it will be readily seen that the majority of growers will have to depend on something else than Prunes before they will step on very much velvet. The Association charges reduce the returns to the producer 12 1/2 to 27 per cent. In the case of 7c. Prunes, or 40-50s, of which there will be very few this season, many growers having none, the net price will be but very little over 6c. In the outside districts buyers are now operating on the basis of Association prices, deducting the percentage about as above noted, but paying cash, while the Association certificates do not mature until May, and if advances are made 6 per cent interest is charged. The charges of the Association to the grower are reported as follows: \$5 per ton for grading and sacking; 5 per cent commission; 2 per cent for

expenses; \$3 per ton bonus. If the large Prunes had been made more reasonable and the four sizes higher, the grower would certainly fare better. In conforming with the Association figures, 2 1/2c. is being named in the outside districts for the four sizes, an unprofitable figure for most growers. Lighter charges for packing and marketing, or higher average prices for the Prunes, appear decidedly necessary to put growers on a substantial footing. European buyers, who were calculated on taking the high-priced Prunes, wired this week that the figure was too high for serious consideration.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	6 1/2 @ 7
Apricots, Royal, choice, in sacks, per lb.....	7 @ 7 1/2
Apricots, Royal, fancy.....	9 @
Apricots, Moorpark.....	10 @ 12 1/2
Apples, in 50-lb boxes, rings, pressed, fancy.....	5 1/4 @ 5 1/2
Apples, 50-lb boxes, rings, pressed, good to choice.....	4 1/4 @ 4 1/2
Figs, White, fancy pressed.....	6 @ 7
Nectarines, per lb.....	4 @ 6
Peaches, unpeeled, fancy.....	6 1/2 @ 7 1/2
Peaches, unpeeled, choice.....	5 @ 6
Peaches, peeled, in boxes.....	12 @ 15
Pears, unpeeled Bartletts, halved, fancy.....	7 1/2 @ 8
Pears, halved, unpeeled Bartletts.....	5 1/2 @ 6 1/2
Pears, quartered, unpeeled Bartletts.....	5 @ 6
Plums, Black, pitted.....	5 1/2 @ 6 1/2
Plums, White and Red.....	6 1/2 @ 7 1/2
Prunes, Silver.....	4 1/2 @ 6

Prices for new crop Prunes, as named by the California Cured Fruit Association: Santa Clara, four sizes, 3c. per lb.; 40-50s, 7c.; 50-60s, 5 1/2c.; 60-70s, 3 1/2c.; 70-80s, 3 1/2c.; 80-90s, 2 1/2c.; 90-100s, 2 1/2c.; 100-120s, 2c., which is the uniform price for this grade; Sonomas, other than smallest, 1 1/2c. less; other districts, 1/2c. less, except for smallest; Ruby, 1/2c. premium.

## COMMON SUN-DRIED.

Apples, sliced.....	3 @ 3 1/2
Apples, quartered.....	3 1/2 @ 4 1/2
Figs, Black.....	2 @ 3
Figs, White.....	3 @ 3 1/2
Peaches, unpeeled.....	4 1/2 @ 5

Recent advices by mail from New York furnish the following review of the dried fruit market in the East:

Evaporated apples are in light available supply, and the light business passing is at full prices. New fruit for future delivery has had a little more attention, and further contracts made at 4 1/2 @ 4 3/4c. for prime, October and November delivery, and 4 3/4 @ 4 1/2c. for December delivery. Very little interest in spot sun-dried apples; makers are seeking bids on new crop stock. Chops, cores and skins have only a slight movement; choice held steady, but poor neglected and low. Raspberries scarce and firm; choice State evaporated would doubtless command 16 @ 16 1/2c. readily—perhaps more—but southern have sold at 15c. Huckleberries slightly weaker; sales at 11c. Blackberries have been more plentiful and lower, 5c. ruling about top at the close and some offering at 4 1/2c. without attracting attention. Cherries in small supply and firm. Sales of North Carolina peeled peaches reported at 8 @ 9c., latter for fancy; some Georgia here but no sales reported. California apricots are higher on the coast, and holders ask 8 1/2 @ 9c. here for Royal; very few Moorpark available. Few new peaches received from California as yet; old stock still quite plentiful and selling as quoted. Very few small California prunes left; 40s range mainly from 5 1/2 @ 6c.

Apricots, Cal., Moorpark, 1900.....	12 @ 13
Apricots, Cal., 1900, per lb.....	8 @ 9
Peaches, Cal., unpeeled, in bxs, per lb.....	7 @ 8
Peaches, Cal., unpeeled, in bags, lb.....	6 @ 7 1/2
Prunes, Cal., per lb.....	4 1/2 @ 6 1/2

## RAISINS.

New pack is in process of curing and initial shipments will soon be made. Association prices are expected to be named in a week or ten days. Outside Sultanas are reported contracted at 7 1/2c, with brisk demand at this figure. A light rain fell at Fresno this week, but no very serious damage is believed to have resulted.

## CITRUS FRUITS.

Lemon market has not shown much activity since last review, nor has it been remarkable for firmness, although values for best qualities were fairly well sustained. Limes were steadily held, with stocks rather light. Oranges are not quotable, there being few obtainable and scarcely any inquiry for them.

Lemons—California, select, per box.....	3 00 @ 3 25
California, good to choice.....	2 25 @ 2 75
California, common to fair.....	1 25 @ 1 75
Limes—Mexican, per box.....	6 50 @ 7 00
California, small box.....	— @

## NUTS.

Almonds are in active request at stiff figures, the demand being greater than the supply. New Walnuts of choice quality bid fair to meet with a firm market; prices are expected to be named the coming week. Peanuts are in light stock and commanding steady figures.

California Almonds, shelled.....	25 @
California Almonds, paper shell, per lb.....	13 1/2 @ 14
California Almonds, soft shell.....	12 1/2 @ 13
California Almonds, hard shell.....	9 @ 9 1/2
Walnuts, White, soft shell.....	— @
Walnuts, White, California, standard.....	— @

Chestnuts, California Italian.....	— @
Peanuts, California, fair to prime.....	5 @ 6
Peanuts, Eastern, hand-picked.....	6 @ 6 1/2
Pine Nuts.....	5 @ 6

## WINE.

Market for wine grapes continues firm, and as the fruit of most of the vineyards has been bought up this season by the wine dealers, there will not be much wine to be marketed from first hands. No prices for dry wines of this year's vintage have yet been announced. Grapes for dry wines are quotable at \$16 @ 23 per ton, as to kind, quality, quantity and location. Two large vineyards near Santa Rosa were reported sold last week at \$19 per ton. In the Napa district it is the exception where choice stock is obtainable under \$22.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, 1/4 sacks.....	73,503	938,580
Wheat, centals.....	52,352	897,121
Barley, centals.....	181,765	1,206,953
Oats, centals.....	26,446	193,829
Corn, centals.....	552	9,559
Rye, centals.....	42,488	53,553
Beans, sacks.....	5,156	25,595
Potatoes, sacks.....	36,538	244,381
Onions, sacks.....	4,860	34,804
Hay, tons.....	4,467	41,833
Wool, bales.....	1,457	7,223
Hops, bales.....	171	462

## EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, 1/4 sacks.....	54,788	488,740
Wheat, centals.....	4,021	790,311
Barley, centals.....	18,684	543,053
Oats, centals.....	—	22,598
Corn, centals.....	—	8,758
Beans, sacks.....	163	3,860
Hay, bales.....	1,501	3,918
Wool, pounds.....	233,621	28,006
Hops, pounds.....	64,930	16,001
Honey, cases.....	439	627
Potatoes, packages.....	2,633	8,934

## California Dried Fruit at New York.

NEW YORK, Sept. 5.—Evaporated apples common, 3 1/2 @ 4 1/4c; prime wire tray, 4 1/2 @ 5 1/4c; choice, 5 1/2 @ 6c; fancy, 6 1/2 @ 7c.

California dried fruits.—Market quiet, but fairly firm for desirable qualities.

Prunes, 3 1/2 @ 7c.  
Apricots, Royal, 11 @ 14c; Moorpark, 15 @ 17c.  
Peaches, unpeeled, 6 @ 9c; peeled, 14 @ 18c.

## MILK



## AERATOR.

REMOVES OBJECTIONABLE ANIMAL AND FEED ODORS.

Write us stating number of cows milked.

G. G. WICKSON & CO.,  
34-36 MAIN ST., SAN FRANCISCO.

## ALMOND HULLERS

—For Sale by—  
A. O. RIX, Irvington, Alameda County, Cal.

## Horse Owners! Use

GOMBAULT'S

## Caustic Balsam

A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.  
THE LAWRENCE-WILLIAMS CO., Cleveland

MOORE, FERGUSON & CO.  
WOOL, GRAIN, FLOUR

—AND—


General Commission Merchants,

310 CALIFORNIA ST., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.





In every town and village may be had, the

## Mica Axle Grease

that makes your horses glad.

Made by Standard Oil Co.

### How to Eat Grape Fruit.

It is surprising that there should be such widespread ignorance as to the proper manner for eating that popular breakfast fruit, the pomelo or grape fruit, states a writer in the Redlands Facts. This lack of knowledge is not confined to the tourists visiting in our midst, but oldtimers of this region are constantly putting the question "How should the fruit be eaten?" and it is not every time that they receive the information desired. The question is most frequently put to the fruit dealers and one received the answer a few days since: "Why slice it right around as you would an orange and eat the sections." A lover of this fruit and an expert in serving them gives the following instructions as the best way to prepare the fruit for breakfast: "Cut the fruit in halves, cutting directly across the sections or layers. Carefully remove all seeds with a teaspoon, and put upon the cut surface of each a good tablespoon of granulated sugar. Do this in the afternoon or evening and set away over night in the refrigerator or some cool place and it will be found in excellent condition for breakfast. The fruit is eaten by scraping out from the ends of the sections the sweetened juice and pulp and eating as one would an orange, with a spoon."

### Bird's Nest in a Beehive.

A bird's nest was recently found in the middle of an unoccupied beehive. A pair of great tits near Ludlow, England, last spring built their nest and laid twelve eggs in a vacant space among the combs of a large beehive, with the swarm in full swing of honey gathering on all sides of them. Both birds and bees went in and out by the same entrance hole, and neither seemed to object in the least to the presence of the other, as the bees were making honey fast; and when the hive was opened twelve eggs were found in the nest.

In the New Hebrides human life has been made safe by the introduction of pigs into the island. The cannibals are said to prefer roast pork to roast man, and as the porcine tribe increases among the natives they may give up their feasts on human flesh altogether, excepting when something unusual happens, such as entertaining a king of some other cannibal island or on state occasions of rare ceremony.

## FANCY POULTRY.

We keep all the leading varieties. Have 60 breeding yards. Why not improve your stock. Man's of the Improved Pacific Incubator. Absolutely self-regulating, hot water. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember the Best is the Cheapest.

PACIFIC INCUBATOR CO.,  
1317 Castro Street,.....Oakland, Cal.

## Cocoanut Oil Cake.

THE BEST FEED FOR STOCK,  
CHICKENS AND PIGS.

For sale in lots to suit by  
EL DORADO LINSEED OIL WORKS CO.  
208 California St., San Francisco, Cal.

### Superstitions Concerning Eggs.

There are many superstitions about the egg. In Scotland and Ireland children are taught by their nurses to crush the shell after eating an egg, or to push the spoon through the bottom in the form of a cross, showing a lingering relief of the once general superstitious belief that witches lived in egg shells and made boats of them, casting spells upon the household. In Italy it was believed that an egg laid by a white hen in a new nest on Easter Day would cure pains in the head or stomach; that, broken in a vineyard, it would prevent its suffering from hail, or similarly would save a field from frost, and its possession gave one the power to see witches. It was also believed that an egg laid on Good Friday, thrown on the fire, would extinguish it, while the devil would be killed if shot with an egg laid on Christmas.

ACCORDING to the science column of a German weekly paper, the hens of China lead busy lives. When not engaged in hatching out a brood of their own kind they are put to the additional and novel task of hatching fish eggs. Chinese cheap labor collects the spawn of fish from the water's edge, puts it in an empty egg shell, which is then hermetically sealed with wax and placed under the unsuspecting and conscientious hen. In a few days the egg shell is removed, and the spawn, which has been warmed into life, is emptied into a shallow pool. Here the fish that soon develop are nursed until strong enough to be turned into a lake or stream.

## Breeders' Directory.

### HORSES AND CATTLE.

**HOLSTEINS**—Winners over Jerseys of EVERY butter contest at State Fairs for last six years. Aged, 4-yr., 3-yr. and 2-yr.-old classes, except 1st on 2-yr.-old in 1895. Last year every butter prize awarded won by my herd, except 2nd for 2-yr.-olds. 21 Jerseys and Durhams competing. F. H. Burke, 626 Market St., S. F.

**BULLS**—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times, either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

**PETER Saxe & Son**, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs. Correspondence solicited.

**JERSEYS, HOLSTEINS & DURHAMS**. Bred specially for use in Dairy. Thoroughbred Hogs. Poultry. William Niles & Co., Los Angeles, Cal. Breeders and Exporters. Established 1876.

**J. H. GLIDE**, Sacramento, Cal. Have 70 choice Durham Bulls for sale.

**JERSEYS**—The best A.J.C.C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale.

### POULTRY.

**WELLINGTON'S IMPROVED EGG FOOD** for poultry. Every grocer and merchant keeps it.

**SANTA TERESA POULTRY FARM**, Eden Vale. Santa Clara Co., Cal. Illustrated catalogue and guide free. Agents Eclipse Aluminum Leg Bands and Rabbit Labels.

**WILLIAM NILES & CO.**, Los Angeles, Cal. Poultry, Belgian Hares. Imported pedigreed stock.

**MANHATTAN POULTRY & STOCK FOOD** is best. All grocers. Depot, 1253 Folsom St., S. F.

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**P. H. MURPHY**, Perkins, Sac. Co., Cal. Breeder of Shorthorn Cattle and Poland-China Hogs.

**BERKSHIRE, POLAND-CHINA & DUDOC HOGS**. Choice; Thoroughbreds. Wm. Niles & Co., Los Angeles, Cal. Established in 1876.

**J. P. ASHLEY**, Linden, San Joaquin Co., Cal. Breeds Berkshire, Poland-China and Essex Hogs.

### SHEEP AND GOATS.

**C. P. BAILEY**, San Jose, Cal. Angora Goats and Persian Fat-tailed Sheep. Catalogue free.

### BREEDERS' SUPPLIES.

**HENTEETH**, Blood Meal, Bone, Chick Feed; circular free, or 4 samples, prices, etc., mailed for 5c postage. Poultry, Pigeon and Belgian Hare Supplies, Incubators, etc. Croley, 506 Sac'to St., S. F.

ELGIN Watches keep accurate time. Sold by jewelers in cases to suit. Prices reasonable.

**COE'S ECZEMA CURE** \$1 at druggists. 25c size of us. Coc Chem. Co., Cleveland, O.

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THE De Laval "Alpha" Cream Separators have just been awarded the GRAND PRIZE at the Paris Exposition, over a large number of separator exhibits from various countries.

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All sizes, both hand and power. Illustrated catalogue and latest book about Ensilage mailed free.

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BRANCHES: St. Paul, Kansas City, Omaha, Ft. Worth, San Francisco.

# THE LYNWOOD HERD OF SWINE

has been pretty well cleaned out of salable pigs and we have but a few young litters on hand. Our stock is now being put into show condition and we cordially invite every visitor to the State Fair to call at our pens and see the kind of stock we keep. It has always been one of the sights of the Fair and we hope to improve on former exhibits.

In answer to inquiries we will describe any stock we think will suit you.

**SESSIONS & CO.**, 117 E. 23rd St., Los Angeles, Cal.

## "HANDY" LOW-WHEELED WAGONS.

We have 'em with STEEL Wheels, 4-inch Tires, and with WOODEN Wheels, 6-inch Tires.

## BEST HEADER TRUCKS Made.

SPECIAL LARGE DISCOUNT OFF LIST. WRITE OR CALL.

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**\$50.00 RANGE FOR \$25.00**  
TO INTRODUCE OUR

**TRIUMPH STEEL RANGE** into every section of the United States, we will for a short time deliver at your depot free of charge our highest grade Steel range for \$25.00. The regular retail price is \$50.00. It has six 8-inch lids. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21 1/4 inches deep, and 15-gallon reservoir. Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet. Best Range made. **WM. G. WILLARD**, Manufacturer, 619 N. Fourth St., St. Louis, Mo. Will ship C. O. D. with privilege of examination.



## Dewey, Strong & Co., Patent Agents,

330 Market Street, San Francisco, Cal.



The Boxers.

Writing of "The Revolution in China and its Causes," in the September Century, R. Van Bergen gives considerable information as to the Boxers.

Any intelligent man who has lived at Peking for six months knows of these so-called Boxers, and has, knowingly or not, employed one or more of them. By the term "intelligent" is meant a man who does not suppose that every human being must necessarily understand his own language, but admits the fact that there are other tongues, and also that, when he travels or resides in foreign countries, it becomes him to familiarize himself with such foreign languages.

Every resident of Peking employs a watchman or doorkeeper, and that person is, in every instance, a member of the Ta-chuan (literally, "Big Fist"); or, as it is now called, "Boxers," society. Properly considered, it is not a secret society, but bears a great resemblance to our labor unions. Its purpose is mainly benevolent, namely, to provide for old or disabled members.

The society of the Boxers is made up of men whose physical and muscular strength has been trained purposely and from early youth, not that they may enter the athletic arena, but that they may engage in a perfectly lawful and recognized career. They are engaged as watchmen by wealthy residents, and as guards by travelers carrying a large amount of money, or to convoy specie for great distances. Such a guard or watchman insures perfect safety, for it places the property or person under the protection of the Ta-chuan union, and thieves or malefactors dread arousing its vengeance. Not a single instance is on record where a member of the Ta-chuan was faithless to his trust.

The Government recognized the union, and frequently employed it to convey treasure. The father of Prince Tuan, and grandfather of the heir apparent, is, and has been for years, the official patron of the union.

It is evident from this explanation that a member of the Ta-chuan cor-

responds somewhat to the modern calling of private detective in our social arrangements. This is further confirmed, since, in either case, men may be hired for specific purposes, and not always in strict conformity to law. The history of the United States contains instances where corporations, in fear of depredations by striking workmen, have engaged a body of private detectives to repel any attack upon their plants. A man in possession of a well-filled purse could, at Peking, engage any number of Ta-chuan members for purposes which would not bear publicity.

~~~~~

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**Pain-Killer**

**A Household Medicine**

A Safe and Sure Cure for  
**Cramps Coughs Bruises**  
**Diarrhoea Colds Burns**  
**Sprains and Strains.**

Gives instant relief.

Two sizes, 25c. and 50c.

Only one Pain Killer, **Perry Davis'.**

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**PAGE**

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**GINSENG** We are Headquarters for  
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Valuable book about it, telling how to grow thousands of dollars worth, what used for and who is growing it. Sent for 10c  
**AMERICAN GINSENG GARDENS, ROSE HILL, New York.**

**Gold Medal**

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**CREAM**

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**Nitrate of Soda as a Fertilizer.**

**CROP FAILURES**

are practically impossible where **NITRATE OF SODA** is used as a fertilizer. Its use has made an exact science of crop growing. You can always rely upon a good crop when it is used singly or in proper combination with other elements of plant foods.

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316 California Street, - - - San Francisco, Cal.  
Write to them for pamphlets.



John Deere Works, Moline, Ill.

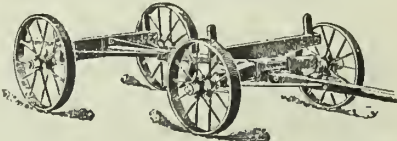
From a single forge and two plows in 1837 to a factory with twenty-five acres of floor room, 1300 employes and an output of over 200,000 implements per year in 1900, is the record of the largest steel plow factory in the world, the Moline Plow Works of Deere & Company, manufacturers of the celebrated John Deere plow.

The above picture, by one of the most noted bird's-eye view artists in the country, has just been completed at great cost. The original is 52 inches wide. It is a faithful representation of the plant, the buildings all being drawn to scale. The lumber yards, where 2,500,000 feet of hardened lumber is kept, and a number of small buildings to the left, have been omitted. The long

buildings at the left of the picture have been erected within the past two years at a cost of over \$250,000. The tempering plant alone has cost upwards of \$20,000, and is the most complete thing of its kind in existence, and enables us to turn out a more uniformly perfect grade of finely tempered plows than has ever before been dreamed of.

The new buildings consist of an immense steel and brick structure for the storage of material of steel and iron. It is 266x205 feet on the ground. A blacksmith shop 266x150 feet, the largest shop of its kind under one roof. A fitting and assembling shop 266x56 feet, four stories high. A grinding shop 266x100 feet, and a tempering shop, including a refrigerating plant for fur-

nishing water of uniform temperature to the tempering vats, 186x50 feet. These fine buildings are equipped with thousands of dollars worth of new and improved machinery, an elaborate system of heating from condensed steam, ventilating and dust extracting appliances, and are model factory buildings in every respect. The company says: "Within the floor space of this great plant could be accommodated any two other steel plow factories in the country. There are at work here more than twice as many men as are employed by any other steel plow factory, and the output of John Deere plows, cultivators and harrows is more than double that of any other factory making a similar line of goods."



**Pacific Steel Handy Wagon.**

**WHEELS**.....28 and 34 inches high.  
**TIRES**.....4 and 5 in. wide, 1/2 in. thick.  
**AXLES**.....1 1/2 inch, solid steel.  
**BOLSTERS AND AXLE STOCKS**.....White oak.  
**CAPACITY**.....Guaranteed 5000 lbs.

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**THE ORIGINAL COLD WATER PAINT.**  
Fireproof and Waterproof. Costs only a fraction of price of Oil Paint. **Waterproof Indurine** is designed for inside or outside use on plastered walls, wood or brick. Inside Indurine is for inside work only and works over old whitewash or kalsomine. White and colors.

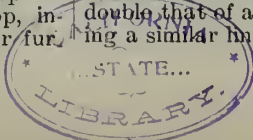
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**Prune Dip.**

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## Patrons of Husbandry.

### Tulare Grange.

TO THE EDITOR:—On Saturday, Sept. 1st, the vacation of this Grange being over, it resumed its regular semi-monthly meetings. After the routine business of opening was over, the Secretary read a notice of the twenty-eighth annual session of the State Grange, to be held at Los Gatos, commencing on the first Tuesday in October, and also proposed amendments to the Constitution of the National Grange, to be voted on at the State Grange.

Brother and Sister Morris were elected alternates to the State Grange.

Bro. Julius Ferrer was added to the committee heretofore appointed to collect a Grange exhibit for the Twenty-fourth District Fair next November.

Bro. E. C. Shoemaker, not being present, sent an address, which was read before the Grange and ordered filed.

The acting Master, Bro. Frank Styles, reported the fruit crop good this year, the season favorable, prices high enough to pay all expenses and leave a good profit to the fruit grower on amount of capital invested. He also said raisins require less labor than tree fruits, are more easily and cheaply cured and will consequently pay better. Not all the members agreed to this, and in a conversational consideration of the financial returns from a crop of raisins and a crop of tree fruits, it came out that before the combine of the raisin growers the Worthy Master sold raisins for 1 cent per pound equally as good as he now gets, under the combine, 4½ cents per pound for in the sweat box; that, as this combine of raisin growers is for the next three years, they will by the end of that time be so well trained in the manifest advantages of combination that it is not probable the combination can afterwards be disrupted; that this is an excellent object lesson in the benefits of combination to the fruit growers of California; that all growers of fruits for commercial purposes should combine, as raisin and prune growers have; to do so is a duty they owe to themselves and to their industry; that every member of Tulare Grange earnestly advocates a fruit growers' combination as the only sure method of making fruit growing profitable, and if all fruit growers were members of the Order of Patrons of Husbandry the fruit growers of California would much more readily and effectively combine; that lack of combination will always be the bane of the industry.

One member inquired as to the propriety of cutting off broken limbs at the present time and while the tree is growing. It seemed to be the opinion of all who had tried it that as soon as the fruit is off the whole tree can be pruned with advantage.

A committee was appointed to discuss the September topic of the National Grange Bulletin at the next Grange meeting.

### Facts About Cowbells.

"One of the comparatively few things that the hand of improvement has not touched is the cowbell, which is made now just as it was a hundred or more years ago, and has now just the same peculiar clanking sound as ever," said a bell manufacturer to a Washington Star writer recently. "Cowbells are made some of copper and some of composition metal; but most of them are made of iron and finished with a coating of bronze. The cowbell is not cast; it is cut from a sheet of metal, which is folded into shape and riveted. The metal cap at the top, through which the strap is passed, is riveted into the bell. Cowbells are made of ten sizes, whose sounds range through an octave. Sometimes musical entertainers who play upon the bells of one sort and another come to us and by selection among bells of various sizes find eight bells accurate in scale.

"There are only four factories in the United States in which cowbells are

made, and in each case the cowbell is only an item of production among other things. Cowbells are sold all over the country, just the same as ever, but much the greater number is sold in the South, the Southwest and the West, where farms are larger, less likely to be under fence and cattle are more apt to stray. American cowbells are exported quite largely to the various countries of South America and also to Australia."

## FRUIT PRESERVATION.

### The Fig Problem.

For the last few days a report has been in circulation in Fresno that in spite of the bubonic plague now raging in Smyrna, Turkey, and the consequent prevention of importing Eastern figs in this country, yet that a way will be found to import the Smyrna product via London. Some of the packers of this city, who are combined, it is said, to keep the price of the Adriatics as low as 3 cents a pound, are doing their best to induce the growers to sell their product at the price fixed by their own combination. It is really very absurd to think that it is possible to import any Smyrna figs either directly or indirectly. The Federal Government may not be induced to let any foreign fig enter an American port, no matter if it comes from London or any other part of the world. Besides, there will be no Smyrna figs packed this year at all. A Smyrna correspondent, answering a letter sent from Fresno, writes under date of August 10th that from seven to ten cases a day are reported; that a great part of the people of Smyrna have fled from the city.

There are at hand now about 150 camel loads of dry figs to be packed for the American market, but no packers can be found to pack them. Besides the scarcity of help, the local government is instructed by an imperial irade not to let the people crowd in workshops and factories. The Turkish Sultan, being in great fear of his life, as it was predicted by Mollas long ago that he would die by such a plague, is very severe in matters of this kind. His majesty is doing all he can to cope with the terrible disease in order to save his life, at least. It is said that the people of the city are afraid even to shake hands with their friends in order to be free from any possible infection of the plague.

The condition of the farmers of the Smyrna country is described to be deplorable. Hundreds of families whose only support is derived from figs are helpless and destitute. Farmers are not gathering their fruits any more. Figs are rotting under the trees. The correspondent believes that not a single pound of figs will be sold this year for the American or any other market.

In the light of these facts it is certain that our Adriatic figs will command a very high price in spite of the combine of the Fresno packers. We are told upon good authority that our packers are loaded with orders, and that new orders are coming in every day. If it was not for the plague in Smyrna, there would have been scarcely any market for our Adriatics. Three or four weeks ago the highest price offered for figs was 1½ cents. It will take only a few days to realize that the price will be advanced to the highest possible point. Every farmer should bear in mind that there will be no Eastern figs this year. The people of the East must have figs, and they might as well pay our prices. —Fig Grower in Fresno Republican.

### Deafness Cannot Be Cured

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube is inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed, Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that can not be cured by Hall's Catarrh Cure. Send for circulars, free. F. J. CHENEY & CO., Toledo, O. Sold by Druggists, 75c. Hall's Family Pills are the best.

## THE VETERINARIAN.

### Answers by Dr. Creely.

#### RECIPES REQUESTED.

TO THE EDITOR:—Can Dr. Creely give a receipt for a good horse liniment that will not blister? also a receipt for worms in horses? and oblige.—OLD SUBSCRIBER, Watsonville.

Soap liniment, 8 ounces; sulphuric ether, 3 ounces; tincture of iodine, ½ ounce; oil of origanum, 2 drachms. Mix and apply with the hair.

For worms, give powdered and dried iron sulphate, ½ teaspoon in morning feed, once daily.

E. J. CREELY, D. V. S.

510 Golden Gate Ave., S. F.

### List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
PIONEER PATENT SOLICITORS  
FOR PACIFIC COAST.

FOR WEEK ENDING AUGUST 21, 1900.

- 656,383.—BOX PRINTING MACHINE—J. F. Ames, Portland, Or.
- 656,498.—PICK—W. P. Bevington, Escondido, Cal.
- 656,596.—ARTIFICIAL TOOTH—R. E. Campbell, S. F.
- 656,395.—LEACHING ORES—E. H. Dickie, Bodie, Cal.
- 656,245.—PADLOCK—J. T. Dufau, S. F.
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### A Publisher's Story.

James Harper, of the publishing firm, had a fund of droll wit which is well illustrated by the following incident:

On a certain occasion a clergyman, who had consumed an hour of his time in small talk, said to the publisher, "Brother Harper, I am curious to know how you four men distribute the duties of the establishment between you." Mr. Harper replied, good humoredly, "John attends to the finances, Wesley settles all the correspondence, Fletcher attends to the general bargaining with authors and others, and—you need not tell anybody," he said, drawing his chair up closer and speaking in a lower tone of voice, "I entertain the bores."

So UNIVERSAL was the custom of free entertainment that it was a law in Virginia that, unless there had been a distinct agreement to pay for board and shelter, no pay could be collected from any guest, no matter how long he remained. In the few taverns that existed the prices were low—about a shilling and a quarter—and it was ordered that the meal must be wholesome and good.

THE Vermont Farm Machine Co., Bellows Falls, Vermont, have been informed by cable that the Improved U. S. Separators manufactured by them have been awarded the gold medal at the Paris International Exposition, where these separators are now on exhibition. This company were also awarded three medals and three diplomas of highest merit on U. S. Separators at the World's Columbian Exposition in 1893. These awards show very plainly the high class of goods manufactured by this company, when they obtain such high honors in competition with the world.



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## CORRESPONDENCE.

## Sonoma County Fruit Interests.

TO THE EDITOR:—Healdsburg is an important fruit center. The most notable enterprise is the cannery of the California Association, or the Fontana concern. At the time of our visit it was giving employment to 600 operatives. It will pack for the season 100,000 to 120,000 cases of peaches, pears, plums, apples and tomatoes. It is now working on the two latter crops. The season has been two to three weeks earlier than last year, and will run to Nov. 15. With the exception of cling peaches—which were the best ever packed—the fruits this season have not been entirely satisfactory. Many think, however, that the prunes grown in Russian River valley are equal to anything in the State, not excepting Santa Clara valley. Your correspondent certainly never saw anything finer than the prunes grown on the John McClish place, near Healdsburg. Most of the seventy-five tons being dried for Mr. McClish by Ira Proctor would grade 40's throughout, and nine selected fresh prunes weighed one pound.

The prunes grown by J. B. Wattles on his bottom land below Healdsburg, and being dried by himself, were also very fine. Mr. Wattles obtained last year sixty tons of dried prunes from fifteen acres.

Porter Bros. have completed a large 3-story and basement addition to their packing house at Healdsburg. They have one of the largest prune graders in the State, being 40 feet long, and separating fruit into eight grades. By the use of elevators, etc., run by power, most of the work will be automatic.

Miller & Hotchkiss have a large dry yard for prunes and peaches near Porter Bros.' packing house. They will pack for the association in the buildings of the old Russian River Canning Co., which will be adapted to the purpose. They expect to pack two carloads per day.

De Latour's dry yard at Healdsburg is outside the association. This concern is now putting out on trays eighteen to twenty-five tons of prunes per day. Packing will be done in the old Gallaway packing house. C. Serginsson is foreman of the yard.

Lane & Butler, near Healdsburg, will pack 100 tons of prunes, also a large quantity of dried apples. Besides the above there are many private driers run on a less extensive scale. Forty per cent of the prune acreage near Healdsburg is outside of the association.

The enterprise of John McClish, in building up a herd of thoroughbred Jerseys and in maintaining a creamery where he makes first-class butter, is worthy of much commendation.

H. G. P.

## An Interesting Letter.

TO THE EDITOR:—I must agree with your correspondent about finding his questions answered before asking. You may remember a short time ago some one asking about how to get rid of fleas. A friend of mine came 18 miles to ask me what had he better do, as life was not worth living because of fleas; all the rooms were absolutely full, and if he put his foot on the ground at night it was like a pincushion. In the next PACIFIC RURAL PRESS our it stated that the best plan was to sprinkle the place with diluted carbolic acid. They tried it and they have no more fleas.

Last week I wanted to know an easy way to dehorn a couple of heifers, and there it was again in the PACIFIC RURAL PRESS.

This year has been a good year all round. Plenty of everything. Our fruit has turned out well, but I think that many people exaggerated the yield. I have fairly good crop of all kinds, from almonds to apricots, so you see that the frost has not troubled us much.

I notice that there are more frequent inquiries about fertilizer this year than usual. I tried a complete fertilizer from the San Francisco Fertilizer Works,

and with very good results indeed. I applied it at the rate of 400 pounds an acre and set a half acre of Early Rose potatoes. I also got a bag of nitrate of soda from Messrs. Balfour, Guthrie & Co., and I used it at the rate of fifty pounds an acre and gave it two dressings. I did not give the potatoes water, but fair cultivation. It was very pleasant to watch the results of the nitrate. It made the haulm grow so well and it gave such shade, etc. The result was just fine, and I got 1½ cents a pound for all I had, and I was selling potatoes when no one else had any fit to eat. One week after I had finished they were at ¾ cents a pound. The cost of the fertilizer was at the rate of \$12.50 an acre, which did not include the nitrate, which cost 2.20 cents a pound at Redding station.

We had 40 inches of rain this year.

W. J. B. MARTIN.

Redding, Shasta County.

## Agricultural Products.

It is estimated that at the present time—and there are yet many million acres of rich unimproved farming lands to be occupied—that the United States produces one-fourth of the world's wheat, 60% of its cotton, 75% of its corn, besides large crops of oats, barley, rye and other farm products of forests, manufactures and of mines, amounting in the aggregate to more than a thousand million of dollars annually.

In the year 1898-99 the exports were as follows:

Products of agriculture.	\$784,989,087
Forests .....	42,126,964
Mines .....	28,832,608
Fisheries .....	6,025,446
Manufactures.....	338,675,558
And all others.....	3,281,559

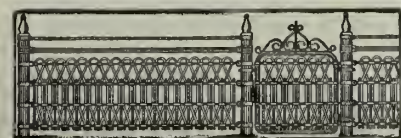
Total.....\$1,203,931,222

In importance, magnitude and value the products of the soil represented by the delegates to this Congress overshadow all other interests making for the comfort, happiness and well-being of our country and its people.

I have been greatly impressed by the magnitude and value of one of the minor branches of agricultural industry—that of eggs and poultry. The value of eggs laid in this country in a single year is estimated at \$100,000,000, and the increase in fowls at \$30,000,000 to \$40,000,000 more! And we enjoy the golden-voiced cackle of the farmyard fowl as she makes known the fact that she is a national wealth producer to the annual amount of \$140,000,000!—From an address at the recent Agricultural Congress.

THE Havana Metal Wheel Co., Havana, Illinois, say: "We were the first to make steel wheels for farm wagons. Having made a specialty of this class of goods, we can say without contradiction that we are able to, and do, make the best line of truck and wagon steel wheels that is manufactured in the United States. We also were the first to anticipate the wants of the farmer in a low down, broad tire wagon at a low price, and the result of our labor is that we make hundreds of different kinds and sizes of metal wheels and ten different kinds of low down, broad tire truck wagons. Those farmers who do not use a low down truck, or a farm wagon with low wheels, do not know how much hard work on the farm can be avoided by having a wagon with low wheels. If your dealers do not handle our goods, write us for catalogue and prices."

FARMER MILES, the celebrated and world-renowned animal castrator and spayer, who has lectured and demonstrated in the London Veterinary College, French Veterinary College, Glasgow (Scotland), Montreal (Canada), Boston and Chicago Veterinary Colleges, is now lecturing and demonstrating at the San Francisco Veterinary College, where he will castrate ridge lings free of charge not to exceed ten in number. Arrangements can be made for private work by applying to M. L. Pancoast, secretary San Francisco Veterinary College, 510 Golden Gate Ave.



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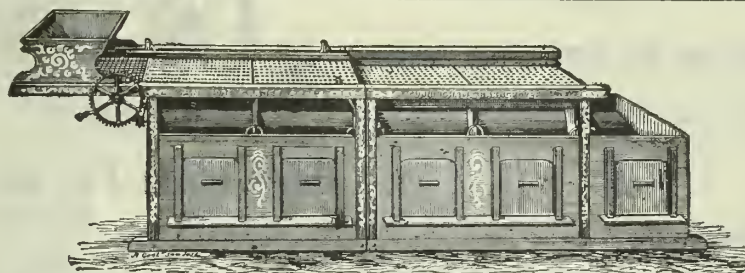
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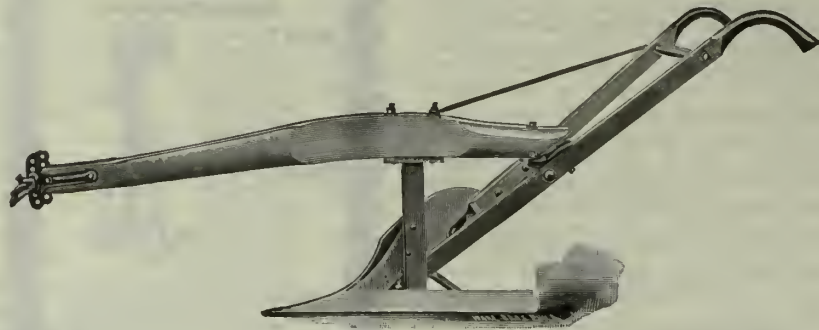
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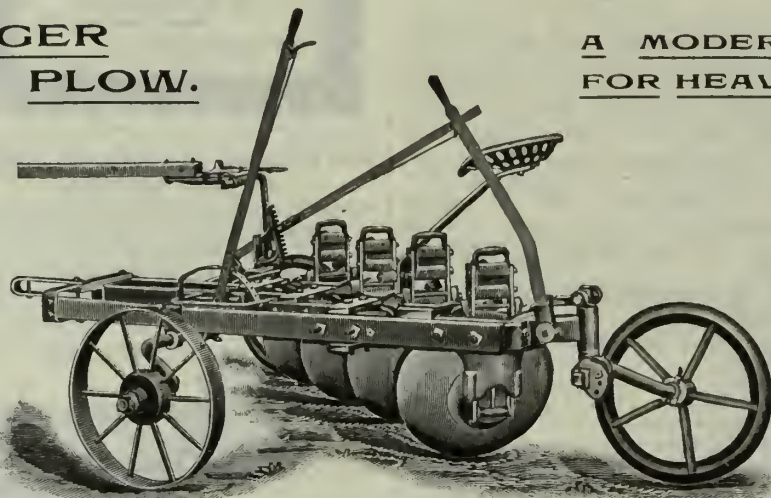
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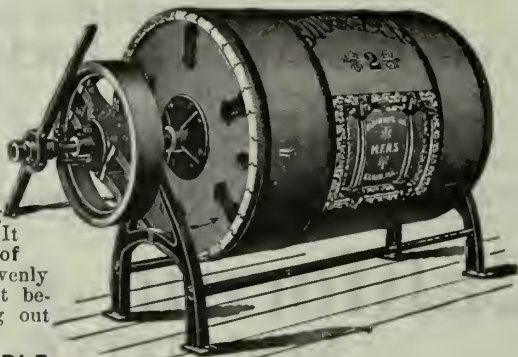
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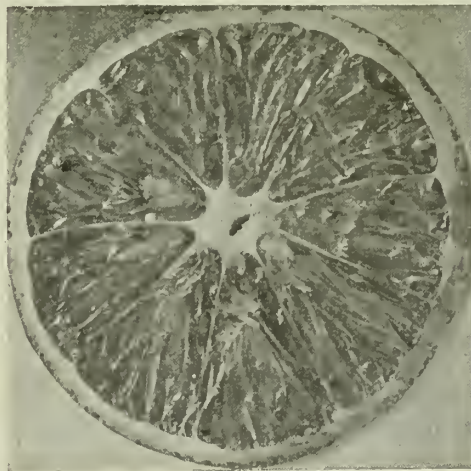
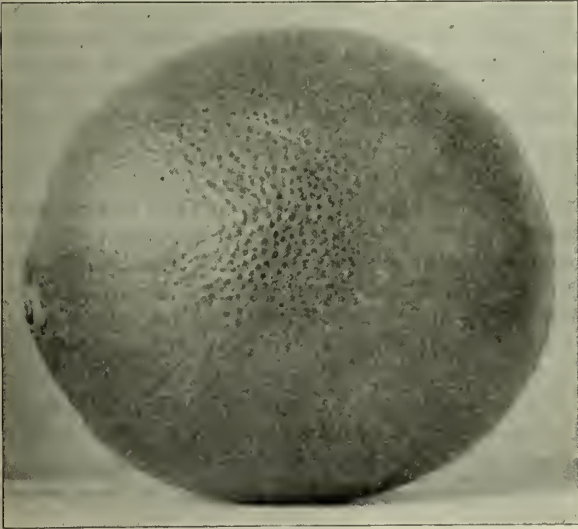
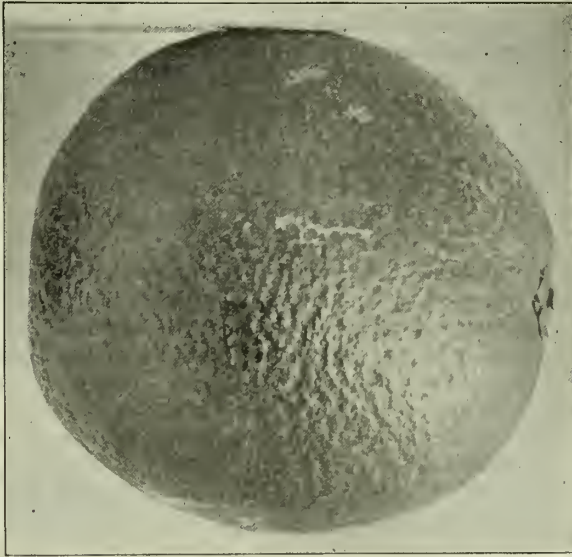
Vol. LX. No. 11.

SAN FRANCISCO, SATURDAY, SEPTEMBER 15, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

### Prominent California Oranges.

We recently illustrated the Washington Navel orange and alluded to it as the California orange par excellence, and largely preponderating in the commercial product of the State. This prominence has increased rapidly during the last five years, and bids fair to be maintained, if not still farther advanced. The Washington Navel shows some disposition toward variation. It is certainly influenced in character by local conditions, and this is recognized in the higher price commanded by the product of some southern localities as compared with others. There is also variation in the oranges of different trees in the same locality, and selection of buds for propagation should always be made from trees of the highest type. There is a very marked type of Navel bearing the name of A. C. Thomson of Duarte, which he accounts for by certain selection of bud and stock which he made. This variety is shown in reduced



Jaffa—Natural Size.

small, orange, but very thin-skinned, fine-fleshed and juicy and of a sprightly flavor. It holds well on the tree and markets well as a medium late fruit. It is very uniform in size and pleases buyers who desire to have a large number of oranges to the box and to get all the pulp and juice they can for their money.

The Jaffa, which is also shown in the engravings, is one of the more recently introduced varieties and is highly esteemed by some growers. It is a coarser orange than the best Navels and the St. Michael, and it seems to vary considerably both in character and popularity among growers.

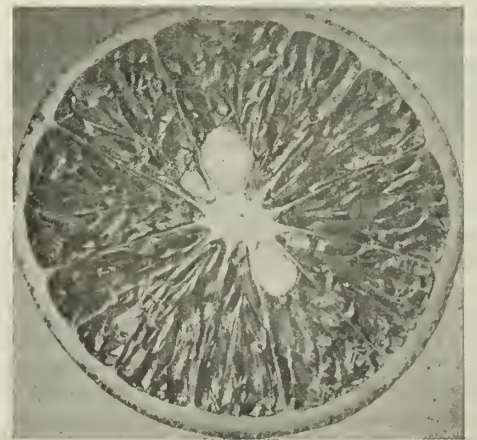
The standard late orange of California is the Valencia Late. It is probably the same as Hart's Tardive, but names change slowly and the Florida name is not widely used. It has good points in its smooth, thin skin, fine flesh and flavor and small number of seeds, but its chief distinctive claim to popularity is its very late season; for, when marketed in midsummer, it

Valencia Late—Natural Size.

form in the accompanying engraving. It has striking thinness, texture and polish of rind, which renders it easily distinguishable from the best of the Washington Navels even when grown in the best localities. Recently, the propagation and planting of this sub-variety of the Navel has increased, and some growers are very strong in praise of it.

In his excellent treatise on citrus culture in California, to which we are indebted for these orange portraits, Mr. B. M. Lelong, secretary of the State Board of Horticulture, illustrates but few varieties of the standard sweet orange as now grown in California for commercial purposes. One variety is conspicuously absent from the collection, and that is the old Mediterranean Sweet, which was very largely planted twenty years ago. The tree is a good one and prolific, but recently the old trees are being widely transformed into Navel by grafting and budding.

Next to the Navels, probably, stands the St. Michael type, of which one variety is illustrated—the Paper Rind St. Michael. It is rather a



Paper Rind St. Michaels—Natural Size.

sometimes reaches the highest price of the season. This is, of course, conditioned upon the quantity, for it succeeds even in competition with midsummer deciduous fruits, and this it could hardly do in large amounts.

Contrasting with this the latest of the standard varieties are the early oranges. Much interest is manifested in securing something which will come before the Navel and be ripe for the holiday season at the East. The Asiatic varieties are being promoted along this line, and of them we shall speak at another time.

FIG PACKERS at Fresno are said to be short of help. A prominent packer said that there are 500 women and girls needed in the packing houses for sixty days. The earnings in fig packing at piece work vary from 50 to 75 cents a day for unskilled hands up to \$1.75 and \$2 for skilled labor.



Thomson's Improved Navel—Reduced.



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E. J. WICKSON,..... Horticultural Editor.

San Francisco, September 15, 1900.

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## The Week.

The overshadowing event has been the celebration of the golden wedding of Uncle Sam and California, of which the dying echoes still reach us as we go to press on Wednesday. Beginning with the slipping of a new war vessel into the bay on Saturday morning, continuing on Saturday night with the grandest pyrotechnic display ever seen in the State, and soothing the emotions with strains of sacred music in the Golden Gate Park on Sunday, the countless throngs from all over the State plunged on Monday into pageant and parade than which for length and breadth and scenic character there has never been greater on the coast. All these events seemed to command the most earnest participation on the part of the multitudes, and happy will be the old men at the end of our first century of statehood who can recall this glorification of the half century mark. It is well that all this has been done. It fitly closes the first chapter of our development and progress as a State. Directions and tendencies have come into view during the last year which none dreamed of, and California will proceed into greatness by leaps and bounds in the immediate future. The pioneer period has now ended and it has been glorious in effort and anticipation. It has well laid the foundations of enterprise and character of citizenship which are everywhere counted Californian. Let the future be true to the past. Let the pioneer rub his tired eyes as he muses: "Eureka—but what is it?" Then shall the citizen of the new century reply: "Yes, you found it, but we made it what it is—the Empire State of the Pacific."

Judging from the amount of business transacted in cereals this week, the entire wholesale quarter was off with the Pioneers and Native Daughters and Sons, making the most of the big holiday. Not a single wheat clearance was made for Europe. South America, however, took 300 tons per steamer and a small lot went to China. Values remain about the same as a week ago; shippers to-day (Wednesday) paid \$1.05 for No. 1 at Port Costa. Barley is firm for fine Chevalier, but weak for other kinds. A transport of the Russian Government sailed this week for China with 3200 tons barley as part cargo. In a valuable cargo clearing for London, having a valuation of \$360,000, there was included 700 tons barley. The same ship took heavy quantities of canned fruits, salmon and wine, also some honey. Oats and corn have been steadily held, with movement slow. In the millstuffs line bran is higher and rolled barley lower. Hay of choice quality is selling readily at former figures, but poor stock drags badly as ever. Beef and mutton were in good request, but did not rule higher. Hogs on foot have taken a tumble in price of about 4c, due to free arrivals from

Oregon, Nevada and the East, as also from points in this State. At the decline, however, there is increased demand. Butter fit for an epicure is not plentiful, but there is too much of the other sort. The situation on cheese shows no change. Prices have again advanced for eggs which are all right as to quality, color and size. The poultry market was firm and active up to Admission Day, but has since sagged. Potatoes and onions have been moving in sufficient quantity to enable sellers to realize better average prices. Tendency on values of most kinds of fresh fruits has been upward, supplies showing decrease. Lemons and limes were no higher, but stocks were materially reduced by thirsty visitors from the interior. Dried prunes are being taken on Eastern and foreign account at the figures recently established. Cured figs of the right quality are bringing comparatively good values. Other dried fruits quiet. Almonds are scarce and high. Prices for new walnuts have not yet been named. Hops are in demand, and so is honey. Wool market is not dead, but sleeping.

## Interest in Cereal Products.

We are very glad to discover indications that California grain growers are disposed to invoke the agencies of progress which are accomplishing so much for the promotion of our other agricultural specialties. For the last decade or more the disposition has been to grow grain in any old way and any old grain in diminishing amount and depreciating quality has been the result. There have been excuses for this. Agricultural reformers, chiefly in the line of exhortation for the increase of fruit products, have abused the grain crop as unprofitable and berated the grain grower as an agricultural back number, of little account either to himself or to the State, until every conception of advancement in grain growing and every impulse to progressive effort has been crushed out of him. If it had not been for the inventors and manufacturers of harvesting machinery, who have made the grain product possible because of lessened cost of production, our grain crops would certainly have fallen to disgracefully low figures. But even their work, commendable and useful as it has been, has resulted in one evil and that is the grower has been led to abandon the thought of how to produce better grain and larger crop and to confine his attention to the one chance of growing grain so cheaply that he could escape starvation, even though the grain was poor and little of it.

We admit, of course, that the general condition of affairs the world over did for many years discourage the higher thought and the better farming. The whole world was depressed and dull and slow, and prices beat the record in the way of low figures. It seemed idle to think of making more effort or any investment whatever in anything except means to cheaper wheat. These means may not have been the only ones to secure that result, because to increase the yield is certainly a very important way to lessen the cost of each bushel; but this required thought and effort and money, all of which seemed to be either tiresome or aimless or out of the reach of the discouraged grower. It was a sad state of affairs all around, and it threatened to cost the State the life of an industry which has in the past done great things for the building up of the commonwealth, and which we believe still has the potentiality of greater things along higher planes of effort under the more favorable conditions which are just beginning to show themselves full of encouragement and promise.

It is no longer desirable to indulge in general exhortations to turn grain lands to fruit, if it ever was desirable to do so. Unquestionably much land which has been diverted from grain should never have taken this course. The fruit interest no longer needs general pushing. It is increasing now by its own attractive force and it stands as a most promising direction of effort on suitable lands and in the hands of those fitted by taste and training for its rather exacting demands for insight, skill and patience. It will advance grandly and the average profit in the future will be better than in the immediate past because fewer mistakes will be made. There is a little chance now that the general exhortation to dairying may result in too rapid change and too free investment without knowledge or discrimination, and yet the dairy stands as the fruit interest stands, a most

promising line of progress for those who are ready to proceed conservatively and without either exaggeration of estimated profit or depreciation of effort and investment required. We ought to be beyond boom movements in all these lines: we ought to be ready to promote them all on cool business foresight and calculation. They are all covered by the exceptionally rich endowment of adaptations which California possesses and they will all help each other if each is fairly met, enterprisingly promoted and wisely placed according to the features of the situation and the fitness of the men who have the work to do.

For these reasons we rejoice now in the indications which we now see of better courage and more intelligent effort in grain growing. There are several directions along which such effort could wisely proceed, and we desire to briefly allude to them. They may be collected under two divisions: First, better varieties; second, better culture, including fertilization and, where desirable, irrigation. These improvements promise to make our grain growing reasonably profitable, and this means that value will be added not only to the annual receipts, but to the actual valuation of thousands of square miles of land.

One of the first effects of depression and discouragement was to arrest interest in better varieties of grain. It was fairly active and widespread twenty years ago. Since then it has lapsed, and even the standard varieties of tried worth in the different regions have been allowed to run out, because the grower did not care enough about it to select even the best of his own grain for seed—much less to seek the truest to the type wherever he could find it. The Agricultural Department of the University continued its work of introducing the best grains to be found anywhere for trial here; but growers paid so little attention to what was offered them that University work was largely turned to other and more popular lines. Sometimes 500 requests would come to the University for a new fruit or forage plant, while less than 50 in the whole State would call for a new grain. This is changing rapidly; last year over 150 University correspondents called for new grains, and this work will advance again. It is hoped this year by co-operation with the Division of Plant and Seed Introduction of the Department of Agriculture, to minister notably to this demand by offering seed of some of the foremost wheats from different parts of the world where conditions favor the type of wheat which California finds it most profitable to export. The same work is advancing on a large scale in the hands of large dealers and growers and promises great results. We read the following in an interior exchange:

A consignment of 1856 bushels of wheat has just been received at Stockton from Australia for seed purposes. It is called White Tuscan, sometimes known as White Essex, and a certificate accompanying the shipment reads as follows: "A late variety, medium height; stout, stiff straw; ears long and rather open; easy to mill, yielding good percentage of flour of excellent strength; has made as much as 310½ pounds of bread to the sack; grain of good size and appearance." The freight on the wheat was \$445.50, and the duty \$465.10.

This is a good thing to do and we hope the Stockton importers will find they have brought in something of great value. We obtained from Australia some of the best wheats we have had in the past, and the Australians are still busy in testing the new wheats of the world and adding to their value for us by means of their acclimation in a similar climate. There is every reason why our grain growers should keep their eyes upon the work of wheat hybridizers and selectors, just as our fruit men watch for the best work of originators of new varieties in their lines. If the interest should be keen enough we would soon have able workers for new wheats in California whose triumphs would be comparable with the achievements of our fruit originators, and they are famous all over the world.

But the best varieties will not do their best unless culture is commensurate with their needs. We are doing scantier plowing than ever, and much grain fails because the soil is never opened sufficiently to receive the winter rains. Deeper plowing, with the land well and deeply fined by thorough harrowing, is essential in the treatment of some of our valley soils. Much of our wheat starts to grow on a shallow plowing with a plow-pan beneath which prevents the reception of water, and prevents, also, suitable root penetration.



The rains puddle this shallow layer, and the grain has to finish its growth in a hard crust over a hard, dry layer below, and it is no wonder that it dries prematurely and fails to fill or gives only shrunken grain. There must be better work in many cases if we are to have better grain.

In many cases it is only better culture that is needed to secure a good yield of fine grain. The old farm on top has been worn out; the new farm below is not made use of. Each one should by a little experimental work on his own farm determine whether such conditions prevail on his place. But beyond this there is now a crying need of fertilizers on our wheat lands. Summer-fallowing has done its upmost in postponing soil exhaustion; there must be plant food brought to the land. This, too, is now being profitably done by some of our wideawake grain growers. We saw the other day a wheat grower from Stanislaus county who tried a little nitrate of soda last year just to see what it would do, and he said you could tell the strip where it was placed by the additional sacks which the combined harvester kicked off its tail-board whenever it crossed it. Next spring he proposes to use \$250 worth of the nitrate and expects to make money with it. No doubt many of our light interior soils have lost their nitrogen first and this application makes all their retained richness available, but there are cases also where phosphates and potash should be used with the nitrate. In all grain regions trials of fertilization should be made, either by individuals or by local granges or clubs in co-operation. In this way demonstrations can be had which will help all in the localities to work wisely and for better returns.

Of irrigation it need only be said that since we have learned to pump so cheaply in large volume, or to turn ditch water in the winter upon the grain fields instead of allowing it to run to the sea or to make ponds and marshes in the waste hollows, there is no reason why so much of our grain land is allowed to hang on the chances of the rainfall. Irrigation of the growing grain crop is also proving very profitable where the water can be cheaply had. We shall probably never suffer again as we did in the dry summer of 1898. Even in the regions of scantiest rainfall in the San Joaquin there can plenty of water be secured, either from the mountains above or the earth beneath, to multiply the grain product and to gather a surplus for export for which the world seems likely to sharply need and for which it will pay a profitable price.

## QUERIES AND REPLIES.

### Soy Beans.

TO THE EDITOR:—I send specimen of bean and leaves. They are hardly a fair specimen on account of the dirt on them. They grow like a small tree, from 1½ to 2 feet high, and are free from climbers. They are grown to some extent by Chinamen on the island. I would like to know the name of them, but have been unable thus far to learn what it is.—P. H. GARDINER, Isleton.

They are soy beans, sometimes called soja beans, and the botanical name is *Glycine hispida*. It is a leguminous plant, native to southern Asia. It is an erect, branching, annual plant, 1½ to 3½ feet high, according to soil and variety. It is a leafy plant and bears an abundance of seed in short, flattened pods. The stems, leaves and pods are more or less covered with short, stiff, reddish hairs. The plant has been grown in China, it is supposed, even before the time of Confucius, and from remote times also in Japan, where it is a very important food plant. It was first brought to Europe about a century ago. It has been known in the southern United States for many years, but only during the last decade has it commanded wide attention, especially as a forage plant, both for green feeding and as hay. It grows well in the corn belt of the Central West, and is adapted to corn soils. It will grow fairly well on soils too much worn for clover, but it thrives better on good land. The soy bean, like the cow pea, can be grown and matured between spring and fall frosts. It is also a good drouth-enduring crop, if well started before dry weather sets in. Though it has gained considerable reputation for resisting the short drouths of the West, and is highly approved and largely grown in Kansas, it does not seem to do its best during the long period of heat and dry air in California, though

there are probably low lands in which it will be found valuable. There are several varieties available from seedsmen which vary considerably in season from early to late. We shall be very glad to hear from our correspondent or others about its growth and value with them. The specimens sent are not only inferior because of dust; the plants show the work of the red spider, which is the bane of many garden and field plants, especially in the interior valleys.

### Paris Green for Diabrotica.

TO THE EDITOR:—Diabrotica can be destroyed by sprinkling with Paris green and water. Pumpkin, and other vines, beans, turnips and potatoes, can be so treated, but beans and turnips must be washed before using. Make the spray so strong that the vines, etc., will show the effects of the poison, i. e., leaves here and there dying. I used about one pound to a barrel of water. While spraying the water must be constantly stirred, a coarse spray being used.—READER, Union Island.

Yes, we knew that the insect could be killed with Paris green, but we have not mentioned it because it is very dangerous to spray garden truck with Paris green when it is soon to be used as food. The same thing is true of spraying ripe fruit with Paris green. The diabrotica does not take to the fruit until it is nearly ripe and Paris green is then dangerous. Of course some garden stuff can be safely treated, as our correspondent states.

### Cause of Sticktight.

TO THE EDITOR: For the past two years a large percentage of our almonds have been "sticktight." As is well known, the seasons have been very dry, but our neighbors have almonds that are free from these "sticktights," while the soil, the pruning, the cultivation and all conditions are practically the same in their orchards as in ours. How can we account for this? Is it because our trees are on peach roots? They are the Hatch varieties.—SUBSCRIBER, Los Angeles county.

We believe the cause of sticktights, or one of the causes perhaps, is scant moisture supply and restricted sap flow during the latter part of the growing season. We have seen most sticktights where such conditions prevailed. It is possible that this might occur on trees on peach root while those on almond roots escaped, because the almond, when it is on a free, deep soil, is a deep-mining root and may reach lower moisture than the peach, and thus better supply the tree. From this point of view your suggestion is reasonable, though we have no observations which amount to a demonstration of the matter. We would like to have the observations of other growers as to the prevalence and causes of sticktights.

### Farm Books for California.

TO THE EDITOR:—I have bought 800 acres in Napa valley, about 5 miles from Napa, for a cattle, sheep and hog farm. Conditions there are entirely different from those I know here, and I feel that I will have the stock and forage and pasture business to learn entirely over. I feel the PACIFIC RURAL PRESS, which I now get regularly, will be a great help to me. But I desire to ask if you have any books published which treat on raising hogs, sheep, etc., in your State, or anything that would teach me anything about forage crops or pastures under conditions similar to those in the Napa valley.—JOHN WILSON, Nebraska.

There are no books along the lines you mention. It is very doubtful if such books would pay the cost of printing at present, because people enough are not choosing these lines of work which we think you are wise in adopting. Our columns will give you the best available information from a California point of view, and by your own observation and by attendance upon Farmers' Institutes and other similar meetings you will advance very rapidly in possession of local points. Your past experience will still be valuable, but you will have to learn new ways of applying what you know.

### Handling Olives.

TO THE EDITOR:—What is the best size to have boxes made to contain olives shipped direct from the tree to the makers of olive oil? Also, what thickness of lumber should be used? What is the best lumber to use for pickling vats and what is the most convenient size to make the vats? I have Mission olives already ripening at Oceanside, half a mile from the ocean. Is not this very early?—ENQUIRER, Oceanside, San Diego county.

All sorts of boxes are used for shipping olives to

the oil mills. The prevailing style is probably the common "lug," or picking box, which is used in handling all sorts of fruit in bulk in shipments to canners, etc. These are boxes without covers and are returned free. Beside these, we have seen shipments of olives in the common free apple and pear boxes, holding forty to fifty pounds of fruit. These are the cheapest receptacles, as they are made of quarter-inch sides and three-quarter ends. The only thing to avoid in selecting lumber for pickling vats is a very resinous wood, like the common Oregon pine. Redwood vats answer very well. Before using for olives the vats should be filled with hot water and lye, allowing it to stand some time to extra color and flavor. There is no agreement in sizes for vats. Some are made 3 feet wide, 8 feet long and 8 inches deep—a shallow vat. Others are quite deep tanks. There is no restriction, except that too great depth brings too much weight on the lower layers; but this is not thought to be objectionable up to 30 inches. Your olives seem to be ripening very early, indeed, this year. Suggestions about pickling olives are given upon another page of this issue.

## WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending September 10, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

### COAST AND BAY SECTIONS.

Unusually cool weather has continued through the week, with considerable cloudiness and light rain in some sections. Conditions have been favorable for grapes, corn and potatoes, which are in good condition. Fruit drying has progressed very slowly. Prunes in Sonoma county are of better quality than expected. Apples are being injured by codlin moth. Wine grapes are said to be below average in quality and quantity in some sections. Hop picking has commenced in many places; the yield is light, but the quality is better than usual.

### SAN JOAQUIN VALLEY.

Generally clear and cool weather has prevailed during the week, and much progress has been made in fruit drying and raisin curing. The rain of the 2nd and 3rd injured raisins in a few places, where paper trays were in use. Some late peaches and pears are going to canneries. Farmers are preparing for plowing and seeding. The grain crop is mostly under cover. A good crop of sweet potatoes is being gathered. Pasturage is good.

### SACRAMENTO VALLEY.

The continued cool, cloudy weather has been unfavorable for fruit drying and raisin making. Light rain has fallen in many portions of the valley, and in some places in Tehama and Shasta counties 1 inch of rain is reported. As timely warnings had been given, fruit trays were stacked, and no great damage was done; late fruit on trees was slightly injured. Grapes are developing rapidly, and there will be a heavy crop of fine quality. A good crop of prunes is being gathered and dried. There is a scarcity of labor in prune orchards and vineyards around Vacaville. Seeding is progressing; a large acreage will be sown. Hop picking is nearly completed. The fourth crop of alfalfa has been harvested.

### SOUTHERN CALIFORNIA.

The weather has been generally cool and pleasant during the week, with considerable cloudiness. Wine making is progressing. The grape crop is not up to average. Canneries are working on tomatoes. Oranges are in good condition and there are prospects of an unusually heavy crop. The water supply is fairly good.

EUREKA SUMMARY.—Weather conditions continue favorable. The late varieties of peaches are small, but of good quality; prunes are somewhat below average. Corn and tomatoes are plentiful. Straw baling is practically finished.

LOS ANGELES SUMMARY.—Cool weather, with showers in some sections the first of the week, favorable for crops. Bean and walnut harvest in progress; latter generally a good crop. Raisin making has commenced on a fair crop of fine quality.

### Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Sept. 12, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week	Total Seasonal Rainfall to Date	Total Seasonal Rainfall Last Year to Same Date	Average Seasonal Rainfall to Date	Minimum Temperature for the Week	Maximum Temperature for the Week
Eureka.....	.04	.04	1.16	.74	60	62
Red Bluff.....	.00	.18	.02	.37	56	90
San Francisco.....	.43	.43	.02	.14	48	90
Fresno.....	.00	.14	.00	.15	52	88
Independence.....	.00	.75	.00	.02	50	82
San Luis Obispo.....	.00	.00	.00	.30	46	76
Los Angeles.....	.00	.00	.00	.10	50	80
San Diego.....	.00	.00	.07	.08	56	70
Yuma.....	.00	.02	.08	.59	56	102



## HORTICULTURE.

### Restoration of Orchard Soils by Green Manuring.

The recourse to green manuring to restore organic matter to the soil, and to promote its richness, its fertility and its retentiveness of moisture, is constantly commanding wider attention in this State. It is now just the time of the year to prepare for this work, for the crop should start early with autumn moisture and get good growth before the cold weather of December and January is reached. We have had much to say about this subject in the past, but it is timely to have a plain and comprehensive review of it, such as the following, which was prepared by Prof. C. R. Paine of Redlands for a Farmers' Institute in southern California:

Our process of getting crops from the soil differs from Nature's in that we exclude, as far as possible, all but a chosen variety. In Nature's fields and forests, while one sort of growth may predominate, all sorts are welcome. When destructive fires and floods sweep over an area of some particular growth, varieties unlike the original may spring up. Generally, as there are "many men of many minds" in any community, there are many plants of many kinds living together for mutual usefulness. This usefulness and the advantage of her methods are shown in the fact that soils uncropped by man, who has a single object in view, always maintain original or increased fertility. Exhausted fields, left to Nature's tending, recuperate and become again like virgin soils. Here is a lesson for us; it is not unknown—it is little heeded.

Nature has no need of cultivation to open ways for air and water to enter the soil, and to form a cover to hold the moisture gained until another shower may fall. We, establishing different conditions and having different objects to accomplish, must break up the surface and even the under soil to permit entrance to these vivifying elements and to form a protecting mulch. Nature makes her own fertilizers and applies them on the spot where formed and needed, and is always successful in her choice and work. We sell a portion of our single crop and buy the elements that make it, gathered for us from the fish of the sea, the fowls of the air and the beasts of the field, and, perhaps, from the plain dirt of the ground. We do not know just what proportions we need, nor how much, nor just how to use this foreign food material; nor do we know how, except to a limited degree, to use the soil, the air, and the water, as we should. While practice has been crude, Nature has been kind, and the soil tiller, though lowly, has been happy.

**THOUGHT ABOUT IT.**—In these times a desire has grown to inquire, to reason, and to join skill with hand to coax fairer and fuller products from a responsive soil. Yet there is no science so undeveloped, so much in need of careful and intelligent study, as soil science. Laboratory theory and practice, widely scattered experiment work and the publications resulting, are helps to remove this ignorance, for they set the worker of the ground to using his mind in addition to his muscle.

None of these helps, so much more used and appreciated by the orchardist brought up in other occupations than by the farmer born, to whom the old ways are good enough, ought to divert attention from such nature methods as may be made applicable to our special work of growing citrus fruits; for what is said on the topic assigned is from the point of view of the orchardist engaged in growing citrus fruits.

The routine of plowing, cultivating and irrigating is as regular for him as the round of housekeeping duties is for the housewife. Soon, when the fruiting has gone on for a few seasons, he thinks the soil needs artificial supplies of plant food. This expense and labor are then added. These essential processes, together with pruning, must always be the price paid for good trees and crops, and he who does them well will reap his reward in the fruit, if not in his pay for it. Some are more ambitious and provident, and use the subsoil to break through the hardpan, natural or formed by surface-working tools. This can be done only in a narrow strip in the interspaces where a sufficient gateway is formed for the entrance of water to be stored for later use.

**PENETRATING ROOTS.**—There is surely not much more than these processes described to be done with tools of steel, but the progressive orchardist remains unsatisfied. There are now a few, and I venture to say that in time there will be many, who will resort to the tools of Nature's own devising, deep-rooting plants, and use their penetrating force to bore to the deeper soil, the acres that lie beneath the acres in sight, to extract therefrom additional supplies of plant food, to open ways for air and water to enter, and the gases of decaying vegetation to pass out. To accomplish the object of increasing the porosity of the soil plant roots are certainly cheaper and more effective than the subsoil plow. Unlike it, they do no injury. Their work of penetration is done all over the orchard area, if desired. Silently, gently, tirelessly, but with resistless force, they go deeper and

wider than any tool can do which the strongest team can draw. Some may say that root pruning is beneficial, for it forces the trees to bear; but this is surely not needed for the regular heavy-bearing Navel orange, and root pruning were better done with system, if needed at all, rather than in a crude, mutilating way. There is doubtless no harm in destroying, by the plow, the network of the annual surface feeding roots of old citrus trees when they have perfected their crops, in this arid climate, where a deep soil mulch is required, especially since they form an obstruction to water penetration.

**RAISING MOISTURE AND PLANT FOOD.**—These plants which we may introduce will gather plant food in regions unvisited by the feeding roots of our orchard trees, and may have a different power of dissolving crude material and appropriating nutriment, which goes from cell to cell of their own tissues, leaving the proper quota here and there, to build up the nether structure, and affording a supply to meet the demands of the leafy portion in the upper air. Our orange soils are mostly deep, lying as they do at the foot of the slopes of the granitic soils of hills, and in the valleys adjacent, and so, generally, the normal mineral elements that may be used for tree and fruit formation are not only of good quality at the surface, but at considerable depths, greater depths than the larger number of the feeding roots that love to grow in the wet, warm top soil can penetrate. In these soils, unless an impervious hardpan intervenes, heavy rains and irrigating waters may carry to the depths they reach some soluble plant food. A portion of this may be lost, but the water brought from below through the cells of the structure of the auxiliary plants carries with it and leaves for use the various salts that such plants can take up. Though the water is lost for immediate use by the tree, at a season when it is not likely to need it, by transpiration through the leaves of the temporary crop a compensation is given in new food provided.

The plants of which I am speaking, useful for green manuring, give their aid also by yielding their very substance with its stored supplies in sacrifice to the permanent growth. We foster, then condemn them; we slaughter them with the plow to rob them of their acquired riches drawn from air and earth. Their dead bodies become our purveyors; their graves are made in the feasting place of what we grow to gain our daily bread. Did we not have the decay of their vegetable bodies to separate particle from particle of the mineral matter of the surface exposed to the hardening influence of the sun after a wetting, these particles would run together in a pasty mass and form a hard, impervious crust. When this is the case there is indicated a lack of humus, the residuum in this decaying process, and a holder of a valuable element of fertilization, the nitrogen, which costs three times as much to purchase as either of the other two we buy when we must replenish its easy loss.

**HUMUS.**—There is no state of the soil its owner likes to contemplate so well as a prime physical condition, thoroughly fined and friable. To secure this is the great object of tillage. In this state it holds moisture and gives free access to air, two most energetic elements in promoting that activity in the soil whence comes growth and fruitage. In obtaining this condition humus is the most valuable agent. Its abundance has mellowed the low lands and made possible their rank herbage. Nothing else can so improve the texture of the uplands, or make so harmonious a development of the growth they sustain, when it is present in due proportion. Without humus such soils are tenacious and stubborn to the most skillful treatment with tools.

Where humus is plentiful in the soil, a greater degree of capillarity results, because the larger passages between the coarser mineral soil grains are filled by the finer humus, thereby converting them into capillary tubes, in which the water which has entered the ground by gravity through its pores may come up, holding in solution, as a broth, the aliment of growing vegetation.

It is easy to understand, as well as to learn by slight observation, that a soil abounding in humus retains the moisture so brought up by capillary action, preventing an evaporation so rapid that the rootlets have little opportunity of absorbing its dissolved contents, the only positive way that the under structure of plants can feed.

It has been proven that virgin soils retain one-fifth more water than those long in cultivation, for the reason that they contain more humus, which substance continually diminishes under the frequent stirring of the soil, a labor which we find absolutely necessary in this arid climate to keep the earth mulch perfect. But it is done at the expense of the valuable substance now under consideration, for air is introduced and the oxidation of the humus follows. This treatment which we are obliged to practice so frequently makes it imperative to create new supplies of humus.

Phosphoric acid is found in soils chiefly in an insoluble condition, but is found soluble, and so at once available for immediate plant appropriation in humus, and fully three times the amount in this desirable form is found in the humus of undisturbed soils as in cultivated. For this reason, too, fresh accessions of humus must be made.

The lessons in soil renovation taught by Nature, whose laws we may never violate, the porosity secured in green manuring, the new food supplies brought from the subsoil, the better state of tilth resulting, the capillarity that is produced, the increase of moisture-retaining power, the ability to hold mineral food in prepared forms, constitute a body of reasons of no small importance, sufficient to induce a grower to cover his ground, permanently set to orchard, in occasional favorable years, with a green crop that gives such valuable returns.

**NITROGEN GATHERING.**—This used to be done ages ago, and it was observed as far back as the times of Pliny, that crops following certain others were greatly enriched by their action and effects on the soil. Why some plants were better than others—for all were of some benefit—for this purpose was unknown, and is only a late discovery. The element nitrogen, which this particular variety of plants, the pod-bearing or leguminous variety, affords is essential, as is every other single element. Its importance consists in the fact that its presence assures a rich, full growth of leaves, buds and wood, the very foundation of fruit formation, and it is easily lost from the soil in its compounds, and costly to replace. An orchard tree may be fully supplied with nitrogen and most other important elements which its constitution requires, and yet not be perfect in its growth or fruiting. Like a spoiled child, it must have everything it wants; no element must be lacking.

When life goes out of organisms, if it were not for the circuit of change there would be vast accumulations of the carcasses of plants and animals on and within the earth, and the soil would soon become depleted of its elements needed to support vegetable life. To effect this change, to turn organic matter back into its mineral elements, to take its turn again in supporting vegetation, is the office of micro-organisms, low forms of vegetable life. The nitrogen of nitrogenous substances is converted into nitrous acid from ammonia by one class of these bacteria, and this into nitric acid by another. Nitric acid at the tips of the rootlets and in the soil chemically unites with bases like potash, soda and lime to form nitrates, the easily assimilable form of plant food of this sort.

This process of nitrification is the one which, under ordinary conditions, supplies the element nitrogen, which, as has been said, is exhausted as soon as there is no more organic matter to be broken down into humus, where the process of nitrification goes on by the two nitrifying organisms.

**ATMOSPHERIC NITROGEN.**—Besides this, Nature has provided a way, which man may utilize, of extracting free nitrogen from the vast reservoir of the air; for there exist for this purpose other sorts of bacteria, peculiar to each species of leguminous plants, which dwell in and about the roots, forming nodules in them, and absorb for their own requirements from the soil air, in the darkness, free—or uncombined—nitrogen. Whoever uses these plants employs an agent of peculiar power.

**GREEN MANURING.**—Give this question of green manuring to a horticulturist of theoretical but limited experience, and he will at once admit its need, denying not all its positive advantages. The old grower who, perhaps, has tried it a little, or observed the trials of others, is slow to assent, and slower still to consent to the proposition. He has done very well without it. The decaying leaves and roots that have been destroyed by the plow and dressings of manure have afforded humus. It is too much trouble to change the annual plan of work. The rains may be lacking. When once the green crop is in, plowing and cultivation must stop until its maturity. If he must irrigate, the furrows will harden and the water of the next irrigation will not penetrate. The plants will fall into the furrows and interrupt the flow, making the work troublesome, and, if on a hillside, the water will break over on account of the obstructions and gully the slopes. In harvesting the fruit the growing crop and furrows hinder the teaming, which unfits the furrows for succeeding irrigations. As he does not know which legume is best to sow, he concludes he will wait awhile.

The old grower who agrees to the theory, but objects thus to the practice of green manuring and has tried it, has not tried it enough to experience its undoubted benefits. It is possible his soil was not inoculated with the particular species of bacterium suited to the chosen legume. He may be like the man who purchased one-half of a ten-acre lot in bearing trees. A more enterprising man became his neighbor on the other five acres and both began the work of improvement, the first man in an ordinary way. The other plowed deeper, got water and oxygen below the old shallow plow pan, stunted neither water nor fertilizer nor labor of brain or hand; nay, he put his heart into his work. Thousands may express the difference in the returns, but the lesson was lost on his neighbor.

**APPLICATION TO ORANGE GROWING.**—A canvass of methods and results in our largest orange growing region has shown that it is the few who pursue the best methods—involving thought, expense and trouble, it is true—and it is these few who have made extraordinary showings in the magnificence of their orchards and the value of their crops. If the majority of growers will not, or cannot, follow the lead of the few, when the fine outcome of their efforts is in



plain view, it is not to be expected that they will trouble themselves with green manuring. The man who can apply stable manure is harder to answer. When used in moderation it has undeniably had good effects. Though its food value is slight in comparison to its cost, it is valuable in its decay, for the humus thus provided affords a ground in which the nitrifying germs may operate. Abundant, smooth, fine, solid and heavy fruit testifies to the worth of judicious applications of farmyard manures, but the quantity is so small for the large areas planted that something else must supply its place, and the green plant stands ready. The decaying vegetation of the orchard affords some humus, but inadequate in amount. Oats, or some grain grown with the peas, if they are chosen for the crop of legumes, provide stalks for the vines to climb on, and thus the furrows are kept quite clear. Unless the orchard shows a distressing lack of nitrogen in weak and pale growth, it suffices to sow alternate spaces between the trees to the green crop for plowing under. In some following year the remaining strips may take their turn. This plan gives room for the wagon work in gathering the crop, and the irrigating furrows need be cut by the wheels at the ends only.

There is no other answer for the man who cannot spare the water to help his fertilizing crop to grow but to advise him to seize the opportunity of favorable seasons of rain to sow it. The water retained by the humus produced and the better tilth that follows will amply compensate for the loss by transpiration in the winter season. It is only when the legumes are young that the surface and furrows harden after beating rains and irrigation. The cover of plentiful foliage shields from drying influences, and the protection thus afforded from the washing of heavy rainfall is no undesirable feature.

Our experiment stations are making unceasing efforts to procure the most suitable leguminous plant for winter growing. Until a better is found the Canadian field pea, sown at the rate of 100 pounds or more to the acre, is a good seed to select.

## THE DAIRY.

### The Value of the Dairy to California.

By PROF. E. J. WICKSON of the University of California, at the California Dairy Convention at Sacramento, September 12th.

The most obvious and appreciable value of the dairy industry to the State is found in the worth of the products, and that is estimated to be about \$13,000,000 per year. This includes butter and cheese, the milk used as food and the by-products of the dairy in veal and pork. It does not include the other very important by-product—the manure, which, if properly conserved and applied to the soil, should be estimated at several millions more. Careful experimentation has shown that the excreta of a dairy cow are worth about 8 cents per day, computed at the standard valuation of the plant food substances which they contain. This for a year would be \$29.20 per cow, and for the 308,872 milch cows, which the Department of Agriculture credits to California, the total value would be \$9,019,062. The worth of the manure is conditioned upon the character and amount of the food supplied to the animal, and the current estimates of value may be based upon higher feeding than California dairymen practice. Suppose, then, we discount the above total one-third, we would still have \$6,000,000 as the value of manure as a by-product of California dairying.

THE DAIRY CREATES FERTILITY.—This by-product is not sold. If the dairying is properly done, every possible part of it is restored to the soil, not only maintaining but increasing its fertility. The dairy is, in fact, not only restorative but productive of new plant food in the soil. If, then, it is claimed that the value of the manure should not be counted because it is not sold, but is restored to the land and used in subsequent production of dairy products, the answer is that the dairy must be credited with this value because it is doing what other leading agricultural industries do not do. Our fruit industries make no adequate return for what they take from the soil and fruit growers each year are paying a larger fraction of their gross receipts for commercial fertilizers. Our hay and grain and other field crops are robbing the soil until its poverty is becoming conspicuous, and still very few growers can command knowledge and courage enough to be generous with the soil. The dairy, if at all properly conducted, is a great conservator and creator of fertility, and returns to the State continually more than it takes. On this ground alone the dairy industry is of great value to the State, and its improvement and extension are matters of the clearest public benefit.

THE DAIRY IN MIXED FARMING.—Another element of value in the dairy lies in the fact that the cow is the cornerstone in successful mixed farming. It is becoming more manifest each year that there is greater safety and prosperity in developing in each region, and in many cases on each farm as well, certain related lines of production to which the conditions are suited. The dairy is a leading factor in diversification, because it is capable of intensive cul-

ture and it returns a high-priced product upon which much labor and investment can be profitably bestowed. Not only is this of great help in making single farms profitable and their owners prosperous, but it distributes its benefits all through communities; it gives regular employment to thousands; it stimulates local trade and builds up towns and villages and assists in the development and progress of all good enterprises. So long, then, as we are buying butter, cheese and pork products by the million dollars' worth from the producers of other States, it is of very great advantage to the State to promote dairying upon the lines of the best methods and the highest quality of products, because it will cancel the great tribute we are paying to other States for what we can produce ourselves and because it will enable our people to easily pay taxes upon an increased home valuation instead of really paying taxes here upon the increased valuation in other States, as they are now doing.

RELATION OF THE DAIRY TO OTHER SPECIALTIES.—I have spoken of the increased assessed valuation of California through the extension of the dairy interest as desirable and of the taxes as easy to pay. This is true, because the dairy, if properly conducted, will make productive and profitable much land which is now almost a burden to the owners. Our grain lands are coming close to the line of actual loss because of the reduced product per acre. Prices have been low, it is true, but with our cheaper methods of seeding and harvesting, grain growing would still be profitable if larger crops could be had. Grain prices are affairs of the whole world and we cannot change them, but the local product is our own affair and we can increase it by more enlightened farming. Proper rotation of cropping and pasturage and proper use of home-made fertilizers will restore the grain yield to better figures, and it will, in this way, bring into our pockets our due share of the millions in value which the dairy by-product, in the form of manure, annually yields. Wherever dairying has been properly introduced into the grain regions of the State there is to be found abundant testimony to the truth of this claim. Dairy extension will increase our grain product and make it profitable.

USE OF LAND NOT SUITED TO FRUIT.—Another way in which the dairy will increase the assessed valuation of the State lies in rendering profitable much land which is not well adapted to what are now our popular agricultural specialties. Fruit trees and vines have been planted on thousands of acres upon which they will never yield profit. The sooner these lands are turned over to some proper line of animal industry the better it will be for the owners and for the State. These lands are of several kinds and they are found all over the State. There are dry lands which produce small fruit and stunted trees, which, if properly handled, will yield rich winter pasturage; there are low lands which are too frosty for fruits or too wet in winter for the health of the trees, which need only good farming to secure immense yields of summer pasturage or silo crops. There are also large areas of reclaimed lands which are of small profit, upon which large herds of dairy stock could be very profitably maintained. All these directions of making scantily profitable lands yield satisfactory income, constitute the dairy of distinct and important value to the State.

THE DAIRY AND THE LABOR PROBLEM.—The dairy industry has a clear corrective influence upon what are considered some of the evils in the labor situation in this State, in that it affords regular employment to so many persons. Our present possession of dairy cows employs upwards of 15,000 people and they are continually employed and comfortably housed. In the dairy connected with fruit or other crops the hands can give part of their time to other work as required, and thus the dairy is the key to continuous employment of nearly all farm labor, except in harvest rushes, and will point the way to the better general condition of our farm laborers, which is so earnestly desired by all. Thus the dairy becomes a valuable reform agency, ministering not alone to the prosperity and comfort, but to the moral welfare of our laboring population.

THE EXPORT TRADE.—Another form of potential wealth and progress to the State lies in the opportunity of considerable dairy exports from California. We have much to do still to adequately supply our own people, as has been stated, but this is only one feature of the outlook. California will have a grand share in supplying the materials for commerce with an opened Orient, which promises to reach great volume and variety. Herein lies a direction of value to the State, which deserves the fullest recognition and development.

WHAT THE STATE OWES THE DAIRY.—The demonstration of great value to the State in the dairy industry places a clear obligation upon the State. Dairy success to-day is only attainable by the most complete understanding of materials and methods and the most effective protection against impurity, sophistication and fraud. These results can only be accomplished by the most patient investigation in the search for new truth and the most effective instruction of all concerned, so that all work shall be done in the full light of the latest knowledge. The State owes the industry the best possible laws and their effective execution. It owes also liberal provision for

dairy experiment and instruction, upon which dairy progress in other States is clearly seen to rest, and for which these other States have used public money freely with the most enthusiastic popular approval. The value which the dairy industry now presents to the State is but a fraction of what it will present if due encouragement is given, and the resulting benefits will be widely distributed. Dairy ownership, dairy labor and dairy commerce will all be enabled to contribute more largely to the prosperity and stability of the State, according to the degree in which State aid is generously given and wisely expended in the interest of local dairy development and progress.

## FRUIT PRESERVATION.

### Pickling Olives.

A San Diego correspondent writes that his olives are ripening, and, though it is still early, the time has evidently arrived when we should give our readers the suggestions on olive pickling prepared by Prof. Hayne for his report on the condition of the olive industry in California, to which we alluded in the PACIFIC RURAL PRESS of June 30th ult. This report was made to the University Experiment Station and concludes with a few suggestions by Prof. Hildgard:

COLOR OF THE OLIVE.—Thus far most of the ripe pickled olives that have been sold on the market have been Missions that have been allowed to become jet black; hence, the idea has gone abroad that all ripe pickles should be jet black. That this is an error has been sufficiently demonstrated. Some olives are naturally light in color, and even the same variety varies greatly in this respect, owing to climatic and soil differences. The only requisite of a ripe pickled olive is that it should contain its full natural oil percentage; for no market in the world will tolerate a soft olive, and any market will soon become educated to the use of sound ripe olives, regardless of color.

The manner of preserving the olive also has a great deal to do with the final color of the pickle. A fruit that has been preserved by the lye process has far less color than one that has been "water cured." Soda will extract far more of the coloring matter than potash; hence, the best practitioners use only potash on this account, as well as from the fact that it softens the flesh less than does soda. While the actual color makes no difference in the eating value of the pickle, it must be kept in mind that uniformity of color is, for the purchaser, a very important consideration, aside from the fact just mentioned that it is impossible to secure a uniform taste, flavor and firmness unless the color be uniform.

PURE WATER PROCESS.—The oldest, and perhaps the best known, method of extracting the tartness from the olive is by simply soaking it in pure water until all the excess of such substances has been extracted. This process, though seemingly very simple, frequently turns out disastrously. It certainly requires as much care and attention as any other known process. The chief drawback would seem to arise from the difficulty of procuring a continued supply of perfectly pure water; and the slightest carelessness in changing the water twice a day will spoil the entire lot, by allowing the dangerous micro-organism to gain a foothold, not merely in the water itself, but in the flesh of the olive.

One of the causes of failure in this case may be attributed to the use of water that is of too high temperature; thus, not only favoring the development and growth of bacteria, fungi, etc., but also relaxing the flesh tissues of the olive and rendering their attacks more successful. In far too many cases the pickle vats or barrels are located in extremely hot places, not only during the curing process, but also after the pickle was ready for sale. It must be kept in mind that there is fully as much reason for keeping olives from heat, air and light as there is for keeping meat, fruit or milk from such influences.

The water must be pure, cool and fresh. Canal water is especially dangerous. The practice of keeping the olives in a running stream of water during the soaking is a bad one, for sound pickles rarely result, owing to a slime or scum forming on the surface of the fruit itself, and thus greatly facilitating the growth of the micro-organisms which spoil the fruit. It would seem that by drawing the water off rapidly at regular intervals the surfaces of the olives are cleansed or "rinsed," so that less danger results.

The size or shape of the vat or vessel is immaterial, except that in no case should the mass of olives be more than 30 inches deep; if deeper, the bottom layers become bruised from the pressure from the top.

A false bottom which enables the impurities and sediments to be constantly drawn off is advisable. A floating cover, which will keep constantly submerged the olives floating in the liquid, is a necessity; besides this, a cloth or covering of some sort should be kept over the top of the whole.

It is immaterial what material the vat or vessel be made of, provided there are no strong tastes that can be communicated. Stone jars are to be highly recommended.

SLIT OLIVES.—In some parts of the State the olives



are slit, thus greatly shortening the duration of the soaking by bringing the flesh of the olive in more immediate contact with the water. The number of incisions vary from one to four. They should be quite shallow, however. One of the commonest contrivances for producing these incisions is to bore an augur hole in a table and place around the edges sharp blades of steel and pass the olives through the hole by hand. Olives thus treated can be cured by the water process in about twenty days, but are neither as attractive to the eye nor are they so apt to remain sound after being cured as those in which no incisions are made.

Ordinarily the extraction process with pure water and unslit olives lasts from thirty-five to sixty days. The water in all cases of soaking should be changed once each twelve hours, though some have occasionally had success with but one change in each twenty-four hours; yet such successes should be considered as accidental. Once a week the whole vat should be well rinsed by repeated filling and drawing off the water in quick succession. The length of this fresh water soaking varies greatly, according to the tartness and toughness of the olive. After the first twenty days the unslit fruit should be tasted every day, and when the proper amount of tartness has been extracted the fruit should be put into a salt brine containing four ounces of good salt to the gallon of water.

**THE BRINE.**—Brine should not be applied at full strength after the tartness has been extracted, but progressively, beginning with four ounces of salt per gallon, followed by eight or ten ounces per gallon, and finally a brine of fourteen to sixteen ounces of salt per gallon, according to the destination of the olive. If for immediate consumption, then fourteen ounces is ample; if for long shipment or keeping for a year or more, then even sixteen ounces could be used. If the consumer finds the olives too salty, they can be readily freshened by a few hours' soaking in fresh water. The stronger the brine the less chance there is of failure to keep well. If the brine at full strength be used at once, the olive will shrink unevenly and "wrinkle," thus taking away much from the market value.

The use of distilled or boiled water can not be too highly recommended. Whenever, either during the soakings with fresh water or during the life of the pickle in brine, a scum should be noted on the edge of the vessel, a careful rinsing should follow. The use of caustic soda can not be too highly recommended in keeping vats, etc., clean, thus removing the wood taste or other foreign flavors.

The main drawback to the use of the water process is that few picklers seem to have the patience to keep constantly changing the water or cleaning the vats. Women, as a rule, are better than men for successful pickling. Indeed, they seem to realize more fully that the pickling process requires as much exercise of common sense and close attention as cooking, and hence their success.

**LYE PROCESS.**—The process of extracting the tartness from the flesh of the olive can be greatly shortened by the use of lye before soaking in fresh water. It is maintained, however, by some of the best practitioners that a few days' soaking in water before the lye is used—changing it every twelve hours—adds greatly in preserving the color of the fruit and will cause a clingstone to become a freestone after the lye has been applied. The lye method requires fully as much care as the water process, but, as the time is very greatly reduced, one must devote his entire time to the work, and not allow himself to be called away from the immediate supervision of the pickling vats.

One of the first precautions in using the lye process is to determine the strength of the material used. The "concentrated lyes" sold on the market are either soda or potash, but most of these are impure. It makes no difference what the brand may be, a statement on the label should show if the "concentrated lye" be potash or soda, and in what quantities. Any brand which guarantees 98% of pure potash or soda can be taken. Unguaranteed lyes will be found to vary from 10% to 99% purity. Thus far, Greenbank lye has been found to be the most common in use, for the simple reason that it marks on the label the exact strength and nature. Pure potash 98% pure should be insisted on. In calculating the strength of the solution when the lye is 98% pure, it may be regarded as 100% pure, unless very large quantities are used. Soda is too caustic and too much of a decolorizer to be recommended.

The amount of lye used varies from one ounce to four ounces to the gallon of water, preferably two.

The olives should be covered with this solution, which should be kept in constant circulation for four hours, more or less, according to the strength of the lye used; then the lye should be drawn off at four hours and the olives immediately rinsed.

The olives should be tasted constantly to determine how far the lye has penetrated. In no case should it be allowed to penetrate to the pit. A slight greenish discoloration marks the line of penetration. Allowing the lye to penetrate about half way from the skin to the pit is in most cases sufficient. It must be kept in mind that if too much or too strong a lye has entered the flesh of the olive almost all its flavor will have been removed, and the keeping qualities so

greatly impaired that there will be but a slight chance of making a marketable pickle. If it is found that there still remains an excess of acidity in the treated olive, it can always be removed by subsequent treatments. In some cases two or even three lye treatments are necessary on refractory olives. Always err on the side of an excess of bitterness than the reverse.

Prof. Hilgard recommends for soft fruit the use of salt in the lye solution, not more than four ounces to the gallon.

Mr. B. M. Lelong recommends the use of lime after the lye is drawn off. He uses four ounces of lime to the gallon of water, and allows the olives to remain in this solution five or six hours.

**EXTRACTION OF THE LYE.**—After the lye has penetrated into the flesh, and the olive has or has not been limed to fix the coloring matter as just described, there remains still an important process to be gone through, i. e., the extraction of the lye from the olive. This lye, either pure or in a combined state, must be gotten rid of before the olive is fit for consumption. This is accomplished by soaking the olives in fresh water, and changing it at least twice a day. There can be no safe limit given for the duration of this soaking; taste alone must be relied on. The flesh of the olive is relaxed and soft from previous treatments and the greatest care must be exercised lest it spoil before the salt brine has been added.

**FIRMING.**—When the lye has been removed, the olive is ready to be "firmed" by the use of salt, and kept in a preservative liquid. At first a brine (boiled) containing five ounces of salt to the gallon must be used and allowed to stand not more than two days. Then replace this first brine with another (boiled), containing from six to eight ounces of salt to the gallon, and allow it to stand five or six days. After this, another brine (boiled) containing eight to ten ounces of salt per gallon of water, and leave a couple of weeks, when the final brine can be used. This brine should be carefully boiled, strained and cooled. If the olives are for immediate consumption, fourteen ounces of salt per gallon is sufficient; if for a long shipment, sixteen to eighteen ounces of salt may be used. During the entire process the olives must be kept in as cool a place as possible. After they are in the final brine they should be at once removed to the coolest place possible. Those who live in localities where it is very hot in summer are strongly advised to send their olives to some cool locality. Whenever the brine becomes cloudy it should be at once removed, the olives thoroughly rinsed and a new brine put on.

The use of alum is not recommended, though it acts as a good firmer, as well as an antiseptic. It is freely used by some, but alum is condemned by physicians as unwholesome.

**SUGGESTIONS BY PROF. HILGARD.**—To the above recommendations on the subject of pickling I would add, from my personal experience, the following points:

1. The stronger the lye used in extracting the tartness of the olive, the more the flesh is softened and the more difficult it will be to make the pickle keep. Moreover, the stronger the lye, and, therefore, the shorter the time of extraction, the greater the liability to its being overdone or underdone. It is far better, by repeatedly using a weak lye, say, not exceeding two ounces per gallon, to prolong the time of extraction, and thus to be able to gauge exactly and leisurely the right moment for stopping the process. I should never expect any fruit extracted within four or five hours to keep beyond six months. As many days will be found to be a wiser economy in the end, the weak lye being removed as often as may be found necessary by its becoming saturated with the "tartness." This is easily determined by its ceasing to feel "soapy" between the fingers. This test is also useful in case an impure concentrated lye is used.

2. The use of salt brine is advisable at any time when the fruit appears to be softening too much, which may readily happen, especially in the case of that which has grown on low or over-irrigated ground, where it becomes pulpy and large. Such fruit can be firmed and properly reduced in size, and made to keep, by the timely use of brine of properly graduated strength. This need not be deferred until after the lye has been washed out; the salt nowise interferes with its action. I consider close attention to this point of extreme importance in respect to the keeping qualities of ripe pickled olives; and it is readily seen that here again the use of good judgment and close observation is of the utmost importance, and that no routine prescription will answer.

3. Different varieties of olives must never be treated together. When one is done just right another will be found overdone or underdone. The same consideration applies to fruit of greatly different sizes. No uniformity of texture, flavor or color can be expected when different varieties and sizes are pickled together.

A 500-ACRE RESERVOIR would require an inflow of water of 3.5 cubic feet per second to maintain loss by evaporation, at a temperature of 60° F.

THE Pacific system of the Southern Pacific Co. has a mileage of 5452 miles and operates 753 locomotives and 19,098 cars.

## Drying Figs.

TO THE EDITOR:—I would like a little information in regard to drying figs. Would you please tell me whether you scald them or dip them in lye, or if you do either one; if not, what process you go through? Please answer me through your columns.—SUBSCRIBER, Newman.

This is a subject which has been quite fully discussed in the PACIFIC RURAL PRESS, but as it is of particular interest this year because of the chance of high prices, we take up the subject again in considerable detail. Dr. Gustav Eisen of the Academy of Sciences, San Francisco, has given much time to the fig, and from his writings we prepare the following:

The fig is mature and ready to dry only when it has attained its proper size and is palatable for eating fresh. When the crop has reached this stage it may be gathered and dried for home consumption, but, in order to produce a superior article, the figs must be as sweet as possible and very pulpy. Too often do we find figs in the market consisting of nothing but skin and empty seeds, without sweetness, flavor or pulp. Figs do not ripen all at one time, and the trees must be gone over daily, in order that only the ripest shall be gathered. Before being picked the fig should be soft to the touch; it should be wrinkled, and should hang downward. Some kinds when ripe show white seams, or cracks, in the flesh. This is generally a sign of complete maturity. Figs will not ripen after picking, and never become sweeter than when cut from the tree. Similarly, figs which have once attained their full maturity do not improve and should be dried at once. If allowed to hang longer on the tree, they may quickly rot, sour or mold, and soon become unfit for use. In order to compete with the best imported figs, our figs intended for drying should be very sweet; in fact, the sweeter the better. When freshly cut they should contain 35% of sugar, and when dried about 55%. For home consumption they do not need to be so sweet as this, for any palatable figs are useful when carefully dried.

**PICKING.**—Figs to be dried should never be shaken from the trees, for, if bruised and injured, they will sour during the drying and become unfit for use. A few figs spoiled in this way will check or prevent the sale of a box of fruit that is in other respects good. Pulling the figs from the trees will also injure them in a similar way. The ripe figs should therefore be cut from the tree with a knife or shears and carefully placed in boxes or trays. Of course, many half-dried figs that drop from the trees may be utilized, but they should first be examined to determine whether they are in good condition, and they must be freed from soil and sand. Our figs do not, as a rule, drop at perfect maturity, but either before or after it. Only the Smyrna figs drop when fully ripe.

For the higher growing varieties a convenient instrument called the "fig cutter" may be used. It consists of a forked stick, across which has been nailed a strip of tin plate. Below this is a small bag kept open by a wire. With this "cutter" the higher figs may be reached by running the fork up under the fig, severing it from the branch and causing it to drop into the bag below.

**SULPHURING.**—Of late years sulphuring figs before drying has become a very common practice among growers. It consists in exposing fresh fruit to the fumes of burning sulphur in air-tight tray holders of varying sizes. The sulphur fumes cause the figs to become semi-transparent when dried, and to present an attractive appearance to the buyer. But nothing is more deceptive, for this very handsome appearance hides a more than worthless interior, not only detestable to the taste, but also injurious to the health of the consumer. Few persons will buy such fruit a second time. Besides giving a semi-transparent appearance to the fruit, the sulphuring prevents fermentation of the figs while drying. This, of course, is of value, and, in fact, is the only advantage in the process. A short and light sulphuring may therefore be admissible with varieties which otherwise would not dry and cure without souring.

For convenience, the box in which the figs are to be sulphured should not be more than 5 feet high nor more than 7 feet or 8 feet wide. This will admit two trays abreast. The trays slide on a rack or on a cleat nailed to the sides of the box, and need not be further apart than just sufficient to clear each other when charged with a single layer of figs. The door must be air-tight, in order that the sulphur fumes may not escape. Two feet of space should be left between the bottom tray and the sulphur pan. The latter, a heavy piece of sheet iron, is heated, but not to redness, and placed on non-combustible supports at the bottom of the box. Two handfuls of sulphur are thrown upon this iron, and when it is burning the doors are slightly closed. Exposure to the sulphur fumes for fifteen minutes is sufficient to prevent fermentation during the drying process and leave the figs with a minimum of sour taste. If sulphured longer they become too acid. After removal from the box the figs should be immediately exposed to the sun. Black figs should never be sulphured.

**DIPPING FRESH FIGS.**—Instead of being sulphured to improve their color and soften their skins, figs may be dipped into a hot solution of salt or saltpeter, or even lye. Unless, however, they are immersed for

(Continued on page 172.)



## Agricultural Review.

### ALAMEDA.

**LARGE GRAPE YIELD.**—Livermore Herald, Sept. 8: Grape picking commenced in the valley this week. The local buyers who are familiar with the situation say that there are at least a third more grapes in the valley this year than last, and that the quality has never been better. Prices range from \$16 to \$30 per ton. The greater portion of the crop is selling at the lower figure, but a number of choice lots have gone at the larger figure. The season has been a peculiar one. The heavy frosts late in April and the dry winter were thought for a time to have completely destroyed the crop, and the growers were very despondent until a phenomenal storm in May revived the drooping vines and started the new wood and blossoms. In midsummer the prospects were again in a fair way to be blighted by a succession of hot days which threatened to destroy what grapes remained. A long spell of cool, damp weather followed and the crop was saved. The grapes are large, firm and juicy, and the percentage of sugar is all that could be asked. The California Wine Association winery opened up Monday for the first time in two years and will be going full blast by next Monday. At one time it was thought that there would be a scarcity of help in the vineyards, but the growers now state that there will be plenty of pickers to gather the crop.

### BUTTE.

**MORE PROFITABLE THAN WHEAT.**—Biggs Notes, Sept. 1: H. L. Brink has just finished harvesting his crop of broom corn. Upon forty acres about fifteen tons were grown. The expense incident to the production of this crop will not exceed \$40 per ton, while the corn is saleable at \$80 per ton, thus leaving a margin for profit of \$40 per ton, or \$600 from the forty-acre tract. This beats grain.

**HEAVY ORANGE CROP.**—Oroville Mercury: Butte county orange orchards are going to surprise even our own people this year when the crop is off and the carloads counted. Old orchards have good crops and many new ones are bearing for the first time. Half a million dollars coming in for Thanksgiving oranges will be a good thing for Christmas trade in towns of the citrus belt.

**MULES IN DEMAND.**—Gridley Herald: There is a flurry in the mule market. The long-eared hybrids are in good demand, thanks to the antics of the rampant Boxers and the Dowager Empress of China. His majesty William II of Germany needs a few mules in his business, and he has representatives going up and down the land seeking out those whose reputation and physical condition make them rank among what are called preferred risks. A. H. Rike, who can tell a good mule at long range, is the agent of the German government, who has been purchasing both horses and mules in this section. On Tuesday last he shipped about eighty head from Gridley to San Francisco, whence they will go aboard transport and be conveyed to China. A. Bonslett furnished six head of mules, receiving \$85 per head. Some of these were old enough to be good, one having been pulling in a plow team for Mr. Bonslett for eleven years. The others were about ten years old. T. B. Channon sold ten head of mules, Walter Johnson three and John Richardson four. J. S. Hutchins of Central House delivered sixty head of mules and horses, the average price being \$45 per head. Many of these were unbroken, and among them were a good many fine animals.

**CHICO FRUIT PACKING COMPANY.**—Chico Enterprise, Sept. 10: The orchardists and fruit dealers, who had for some days been working on the proposition of establishing a fruit receiving station and packing house in this city, met on Saturday evening at the office of B. Cussick for the purpose of organizing and electing officers. The company is to be known as the Chico Fruit Packing and Warehouse Co., and at the meeting on Saturday evening the following board of directors were elected: A. Lowe, W. J. O'Connor, H. B. Reed, B. Cussick, J. B. Stewart, L. H. McIntosh and T. N. Crew. W. J. O'Connor was elected president; B. Cussick, vice-president; H. B. Reed, secretary; J. B. Stewart, treasurer. The warehouse and packing house, upon which work was commenced last Monday, is rapidly coming into shape, and the work of completion will be hurried forward as rapidly as possible.

### FRESNO.

**NEW WINERY.**—Fresno County Enterprise: The new winery on the McCall road at the "Four Locusts Corner" is completed and will begin crushing grapes Sept. 10th.

**FIG PACKING.**—Fresno Republican,

Sept. 6: In packing figs they are first run through a grader and steeped in boiling water, to preserve them and render them pliable. They are then cooled and turned over to women and girls, who compress them into wooden frames the size of a carton, after which they are wrapped. Each carton is put up in fancy paper and weighs a pound. At Seropian Bros.' packing house employment is given to 225, mostly women. Markarian Bros. expect to employ 250, and T. J. Hammond has about 100 helpers. The crop will be large—about 150 cars. Much damage was done to the crop by the unusual hot spell at the beginning of the season.

### LOS ANGELES.

**CLAREMONT ORANGE GROWERS.**—Pomona Progress, Sept. 6: The Claremont Citrus Union held its regular annual stockholders' meeting at the packing house of the union in Claremont on Thursday. The reports of the officers were very satisfactory. They showed that the growers had received an average of \$1.40 net for Navel oranges of all grades for the season, a splendid showing. It cost the union 28 cents a box for packing this season, which was less than ever before. The former officers were re-elected, as follows: J. R. Moles president, George F. Ferris vice-president, H. H. Wheeler secretary. These and Allen W. Towne and Walter Shafer constitute the board of directors.

**AZUSA-COVINA-GLENDORA FRUIT EXCHANGE.**—Azusa Pomotronic, Sept. 6: At the annual meeting of the Azusa-Covina-Glendoria Fruit Exchange, held at the office of the association in the Azusa Valley Bank last Saturday, the old officers and board of directors were re-elected. The officers are: H. L. Macneil president, W. L. Powell vice-president and representative to the Southern California Fruit Exchange, P. C. Daniels secretary, and W. M. Griswold treasurer; directors, W. R. Powell, Wm. Bowring, Asa Hall, H. D. Briggs, H. R. Seat, H. L. Macneil, Jas. Slauson, S. C. Headley and A. P. Griffith. The season just closed was the most successful in the history of the local exchange, not only as to prices obtained, but also in the volume of business done.

### SACRAMENTO.

**HEAVY SHIPMENTS OF GREEN FRUIT.**—Sacramento Bee, Sept. 10: On Sunday morning forty-eight carloads of green fruit were shipped to Eastern points from this city, as follows: Peaches, 12½; pears, 9½; grapes, 21; apples, 5. This morning the fruit shipment amounted to 44 carloads, in the following order: Peaches, 12; pears, 11; grapes, 16; apples, 5.

### SAN BENITO.

**PRUNE PICKERS SCARCE.**—Hollister Advance, Sept. 7: The price of prune picking has been raised to 6 cents per box. Pickers are scarce even at that price.

### SAN DIEGO.

**CANNOT LIBERATE BELGIAN HARES.**—San Diego, Sept. 4: An ordinance has been adopted by the supervisors making it unlawful to liberate Belgian hares in this county or to permit any which may have escaped to remain at large. The ordinance adopted makes it unlawful for any person to have in his control any Belgian hare without providing safe and sufficient means of enclosure to prevent the same from escaping or running at large. Every violation is punishable by a fine not to exceed \$100.

### SAN JOAQUIN.

**DIVERSITY OF CROPS BEST.**—Lodi Sentinel, Aug. 25: Harvest is nearing completion. Wheat and barley continued light throughout, and now the farmers are hopeful of a better market. Many of them are still holding last year's crop. Fruit, grapes and nut crops are also light. Growers of wine grapes expect big returns for what they can market. More vines are being set out, and this bids fair to be one of the best wine producing sections in the State. Farmers are becoming more and more impressed with the idea that it is not safe to depend upon one crop. The up-to-date tiller of the soil sets aside parts of his holdings and devotes a portion of his time to fruit, grapes and creamery products.

**NEW GRAIN WAREHOUSE.**—Stockton Mail, Aug. 31: Frank Lane's grain warehouse is nearing completion. One portion of the structure is 350x150 feet in ground dimensions, and another portion 150x50 feet. It will be covered with corrugated iron, and after the in-filling settles will be floored with bitumen. It has a capacity of 15,000 tons and the cost is about \$15,000.

### SANTA CLARA.

**UNFAVORABLE WEATHER FOR FRUIT CURING.**—Gilroy Gazette, Sept. 7: Orchardists were much alarmed on Tuesday by reading the Signal Service report which predicted rain that evening and the following day. To the great joy and satisfaction of every one in this community, the prognostication was unfulfilled.

Wednesday opened with a blazing sun in the east and the hot day resulted in untold benefit to the vast quantities of prunes that are yet on the trays. The cool and foggy weather has been a great drawback to fruit men. Dr. Koebig informs us that he has twenty tons of fruit still on the trays that have been there for two weeks. With a week of warm weather practically all the fruit in the valley will have been cured and under cover. Prune growers are still bustling for pickers.

**PRUNES, ALMONDS AND GRAPES.**—Washington Press: The prune harvest is over and the almond crop is now ready. In about two weeks grape picking will begin.

### SANTA CRUZ.

**FRUIT GROWERS ORGANIZE.**—Watsonville Pajaronian: The Orchardists' Association of Pajaro valley has been organized and the following were elected as directors: Chas. H. Rodgers, M. B. Tuttle, C. E. Chesebrough, J. L. Curtis, Chas. Smith, H. H. Cowles, C. O. Silliman and James Waters. The following pledge of membership was adopted: "I do hereby promise and agree that I will use my best efforts to eradicate and destroy all fruit pests on my own premises or any premises under my control and charge, and to produce clean fruit; and to the utmost of my ability further and advance orchard interests." A resolution was adopted endorsing the work done by Horticultural Commissioner C. H. Rodgers, and pledging him support and assistance. A. N. Judd, Chas. Smith and C. E. Chesebrough were appointed a committee on resolutions.

**FRUIT NOTES.**—Watsonville Pajaronian, Sept. 6: The Bellefleurs are commencing to go with a rush. Red apples are making an unusually handsome showing in Pajaro orchards this year. Pajaro Newtowns retail at from 5 to 6 cents apiece in London fruit stalls, and sell at about 12 cents per pound in the markets. And there is and will be a market in the world's greatest city and trade center for Pajaro Newtowns so long as they are kept clean and of choice grade, notwithstanding the competition of large Eastern apple crops and their low prices. The Newtown is the king apple in the English market. It has a place and a reputation, and it will bring high and profitable prices so long as they are kept to fancy grade.

### SHASTA.

**FRUIT DAMAGED BY RAIN.**—Anderson Searchlight, Sept. 7: Tuesday's storm did some damage to fruit in this county. The pears of the Anderson district will possibly be most injured. That fruit is just ripening, and the rain colors it, depreciating its value in the market. Grapes hanging ripe on the vines were ruined by the showers.

**SALMON TROUT HATCHERY.**—Marysville Democrat: The propagation and distribution of small trout is finished for the present year, and now the employees are preparing the corral and hatchery at Battle Creek, near Anderson. On the banks of the stream, 3 miles from the Sacramento river, two large hatcheries are located, one owned by the State and one by the United States. From twenty to thirty-seven millions of spawn of the salmon trout are taken at this point annually. The two hatcheries are filled to their capacity, about 30,000,000, and when the catch exceeds this figure the eggs are eyed, packed and shipped to other hatcheries at Sisson and Taboe, where they are batched. Government pays half of the expense of catching and hatching, taking about 6,000,000 annually to Eastern waters in a shipping car. F. M. Chamberlain, an expert in the employ of the Government, has just arrived at the Battle Creek station to study the habits of salmon.

### SOLANO.

**PRUNES AVERAGING SMALL.**—Orland Republican, Sept. 7: Dried prunes are now being received in considerable quantities at the packing houses at Suisun. The crop is large this year, but the quality is rather below the average. In a short time the packing houses will be running at their full capacities.

### SONOMA.

**FRUIT PACKING AND DRYING.**—To THE EDITOR: The fruit packing interests at Santa Rosa have been materially added to the present season by the construction of M. L. McDonald Jr. & Co.'s packing house, located near the Southern Pacific Railroad depot. The drying yards adjacent are extensive and quite free of dust. The packing house is 60x150 feet in dimensions, and is supplied with a large grader and other necessary machinery, which is run by water power. The company will dry 600 tons of fruit in their own yard, will expect to pack at least fifty cars, mostly with prunes. The Merritt fruit drier at Santa Rosa is now handling seventy-five tons of prunes each day, which, after being dried at the yard, are taken to

the packing house of the company, where they expect to pack 150 to 200 cars for the season, mostly of prunes. The company had 1000 tons of fresh prunes on their list at the beginning of the season, but they will exceed this amount. Their charge for drying is \$10 per ton. The packing house gives employment to fifty operatives during the busy season. Devereaux's yard will dry 600 tons of prunes the present season, besides considerable quantities of pears and peaches, all of which may be packed at the Devereaux warehouse. J. Roberts, who has fifteen acres in bearing prunes in the outskirts of Santa Rosa, has a fine crop of that fruit which he is drying on his grounds. Other growers are doing the same. As a general thing the large yards do better work in drying than do the individual growers.

### H. G. P.

**NEW WINERY.**—Cloverdale Reveille: When completed Paul Leroux's new winery will be decidedly convenient and labor saving. It is circular in form and 50 feet across and 30 feet high. The crusher is in the center of the building and the perfect arrangement of every feature of the winery forcibly impresses one. He has two beam presses and the crusher is worked by horse power. The cellar at present has a capacity of 35,000 gallons, including three cement tanks of 5000 gallons capacity each. Mr. Leroux will crush about 200 tons this season.

**DISTRICT FAIR.**—Santa Rosa Press-Democrat: The premium list of the coming agricultural fair, which takes place here Oct. 8-13, has been announced; \$3000 is offered in premiums.

**DRIED FRUIT INDUSTRY.**—Sonoma County Farmer: Prunes are about all gathered in the Piner district and the crop is considerably larger than at first estimated. The prune orchards that border the entire length of Coffey lane have yielded a very fair crop and the size and quality of the prunes are quite satisfactory. The Chinese who ran fruit driers so perseveringly through these parts last year are not pursuing their vocation as energetically as at first. Evidently the price for the dried article is not good enough to warrant a vigorous policy, and also the apple crop is not equal to last year, though a good many lie rotting on the ground.

**NEW CREAMERY.**—Petaluma Courier: A new creamery plant has just been built for C. J. Murray of Nicasio. Everything was ordered first-class. The creamery has a capacity of 1750 pounds of milk per hour. The dairy has 900 acres of land and runs about 100 cows.

### STANISLAUS.

**COUNTY FAIR.**—Modesto Herald, Sept. 1: The County Agricultural fair and races will be held at Modesto on Oct. 11th and 12th. Good races and exhibits are promised.

### TEHAMA.

**SHEEP SHEARING.**—Red Bluff News, Sept. 7: The lead band of sheep belonging to D. S. Cone is expected down from the mountains to-day or to-morrow, the second band to soon follow. Shearing will be commenced at the Antelope creek shearing corrals on Monday, the 9th. A few shearers are now engaged there shearing the rams.

### TULARE.

**HEAVY PRUNES.**—Visalia Times, Sept. 1: S. A. D. Hogan brought to town nineteen dried prunes that weigh a pound. These were all windfalls, and he believes he has some on the trees that will go sixteen to the pound when dried.

**WATER DEVELOPMENT.**—Porterville Enterprise, Aug. 31: The pumping machinery for station No. 2 of the Lindsay Water Development Co. has arrived. The pump is a 6-inch horizontal centrifugal directly connected to a motor. The motor is a 50 H. P., two-phase, 2000-volt Westinghouse induction, of a speed of 850 revolutions a minute. The motor and pump are mounted on a very heavy cast sole plate, the total weight of motor and pump being over two tons. This outfit will be placed in the bottom of the pit 8x9 feet and 50 feet deep. It will be so arranged that one man can raise the pump 10 feet on a track in case the water should raise in the pit. The pit is to be curbed with 2x12-inch redwood boiled in asphaltum. The pump will be under a 100-foot head, and will pump through a mile of pipe line. The company which has a contract to furnish the material and install the plant guarantees 50% efficiency.

**WATER RATE RAISED.**—Porterville Enterprise, Aug. 31: At a meeting of the directors of the Pioneer Water Co. the price of water per inch for irrigation was raised from 15 to 25 cents.

**WAGES ADVANCED.**—Visalia Delta, Sept. 5: Prune growers have increased wages so that workers in vineyards and orchards can earn from \$1.75 to \$2.50 per day.



## THE HOME CIRCLE.

## Good-Children Street.

There's a good little home in Good-Children street,  
My heart turneth fondly to-day,  
Where tinkle of tongues and patter of feet  
Make sweetest of music at play;  
Where the sunshine of love illumines each face  
And warms every heart in that old-fashioned place.

For dear little children go romping about  
With dollies and tin tops and drums.  
And, my! how they frolic and scamper and shout  
Till bedtime too speedily comes!  
Oh, days they are golden and days they are fleet  
With the little folk living in Good-Children street.

See, here comes an army with guns painted red,  
And swords, caps and plumes of all sorts;  
The captain rides gaily and proudly ahead  
On a stick horse that prances and snorts!  
Oh, legion of soldiers, you're certain to meet—  
Nice make-believe soldiers in Good-Children street.

And yonder Odette wheels her dolly about—  
Poor dolly! I'm sure she is ill,  
For one of her blue china eyes has dropped out  
And her voice is asthmatic!ly shrill:  
Then, too, I observe she is minus her feet,  
Which causes much sorrow in Good-Children street.

'Tis so the dear children go romping about  
With dollies and banners and drums,  
And I venture to say they are badly put out  
When an end to their jubilee comes;  
Oh, days they are golden and days they are fleet  
With the little folk living in Good-Children street!

But when falleth night over river and town,  
Those little folk vanish from sight,  
And an angel all white from the sky cometh down  
And guardeth the babes through the night,  
And singeth her lullabies tender and sweet  
To the dear little people in Good-Children street.

Though elsewhere the world be o'erburdened with care;  
Though poverty fall to my lot;  
Though toil and vexation be always my share—  
What care I—they trouble me not!  
This thought maketh life ever joyous and sweet—  
There's a dear little home in Good-Children street.

—Eugene Field.

## Maybury's Repentance.

"I don't pay much attention to what doctors say," he remarked in his importantly jovial way. He was a tall, dogmatic, well-dressed man of thirty something. "Point of fact, I've never had occasion to see one before, but—"

"You are fortunate, Mr. Maybury. Won't you sit down?"

"No," he replied, "I won't. One doesn't get on in life by sitting down. My motto is to keep going."

"Most of us have to pull up now and again. The human frame—"

"Look here," remarked the city man truculently, "you're not going to frighten me. Although I've had little to do with you medical men, I know there are two sets of you; the optimists and the pessimists. Some of you are too sanguine, and others are not sanguine enough, but none of you tell the precise truth."

"A medical man," said the doctor, trying to preserve his temper, "has to use discretion. A medical man who blurted out the actual truth might well be doing his patient a good deal of harm. You must allow us, my dear sir, to know our own business best."

"That's just what I shall not do!" cried Maybury with vehemence. "There's more of humbug among you doctors than—than—"

"Than on the Stock Exchange?"

"Than in any other profession. Those of you who are not sheer quacks—"

"Really, Mr. Maybury," said the doctor, offended, "you must allow me to say—"

"Are you a specialist in this trifling complaint that I am suffering from?"

"No," replied the doctor, shortly, "I'm not."

"Then give me," said Maybury, "a note to the man at the top of the tree, and I'll go on there in my cab like a shot."

The doctor was sorry to lose sight so quickly of an important client, but Mr. Maybury's aggressive manner had not pleased him, and even doctors, careful as they are to cloak the fact, have their sensitive moments. He scribbled a note. Mr. Maybury laid on the table an admirable fee, and taking the letter ran out to his cab.

"Two, five, two Harley street!" he shouted.

"Right you are, sir," said the cabman. "Winder up or down?"

"Never mind the window. Put your horse along sharp."

"Gent," muttered the cabman to himself, "seems to be in a bit of a hurry."

Indeed, this was the usual manner of Arthur Maybury. When the cab stopped at one of the large houses in Harley street, which bore, like all its neighbors, a square brass plate on the open door, he went hastily through the hall, and without going into the waiting room, opened a side door. A stout, florid man was seated at the table reading the advertisements in the British Medical Journal. Mr. Maybury banged his silk hat down on the table and shook hands.

"My name's Maybury," he said delivering the note. "Here's my card. A meeting of directors is waiting for me at Cannon Street Hotel; I can only spare five minutes. Now, just run over me Dr. Jeyeson, as sharp as ever you, and give me a prescription."

"First give me your symptoms." Mr. Maybury described them. A feeling of depression in the evenings; slight insomnia; absence of appetite. The florid man eyed him seriously and held his wrist for a few moments.

"I may as well tell you," went on Maybury, with a burst of frankness, "that I am to be married in a few months to a very charming girl; dare say you have seen the announcement in the papers. Miss Tearle, daughter of that Irishman who lost all his money in the—"

"Mr. Maybury!" The stout, florid man came round and stood with his back to the fireplace. "I have an important announcement to make to you. Your engagement must be cancelled."

"Oh, no," said Maybury, with a gesture of protest. "That be hanged for a tale. She'd go and marry some one else, and they wouldn't have sixpence between them. I couldn't allow her to endure that fate, Dr. Jeyeson."

"I have nothing to do with the lady," he said with gravity. "I am only concerned with you. You are suffering from a rare complaint, known to us medical men as—" Maybury did not catch the phrase. "It is my duty to tell you, sir, that," he coughed and lowered his voice, "that you have but a few days to live."

Arthur Maybury half fell, half sat on the nearest chair. His face went very white; his lips moved, but no sound came.

"Serious news to tell a man, I know, but it's best that you should know the truth. What I recommend is that you should go to the Riviera at once." Maybury ejaculated something in a whisper. "Ah, it's of no use damning the Riviera. That won't help you. You get away by to-night's mail without saying a word about your condition to anybody, and take the few remaining days of your life as quietly and as calmly as you can. Be sure not to talk of it; that will only increase the excitement and hasten the end."

"Are you—are you sure of this, Dr. Jeyeson," stammered Maybury.

"I am not in the habit of making mistakes."

"What is the time now?"

"The hour is now two o'clock. You have seven hours in which to make your arrangements."

"And can't you give me a prescription or anything?"

"My dear sir, pray be reasonable! Yours is no case for prescription."

There was a pause. Maybury looked stupidly at a portrait of Sir James Paget on the walls without seeing it; his adviser drummed at the mantelpiece impatiently.

"What—what is your fee, Dr. Jeyeson? Shall I give you a man a cheek?"

"Twenty guineas, if you please. Perhaps you will leave it there on the table. Either gold or notes."

With trembling hand Mr. Maybury counted out the amount.

"Twenty-one sovereigns," he said thickly. "Rather a lot of money to pay for being told that one's not going to live a week, isn't it?"

"I'll see you to the door myself, Mr. Maybury. And, above all, don't speak of this to a soul. Make it, I beg, your own secret."

Harley street is really a very straight thoroughfare, but to Maybury, walking down unsteadily toward Cavendish square, it seemed full of odd convolutions. More than once he had to stop and grip at railings in order to recover his self possession; passers by stared at him curiously, and a servant girl said something so very amusing about his manner to a servant next door that the servant nearly slipped down the area steps. In Cavendish square he became himself. He was a man used to obstacles; his practice in overcoming them came to his aid now. First he must go somewhere and think. His club? No; there he would find men whom he knew. His flat in Ashley Gardens? Yes. He would be alone there. Much to think about and much to do before he left Charing Cross that evening. He would, as the Harley street man had advised him, keep his own company; there was no one in the world with whom he would care to share the secret. He feared that if he were to tell some men of his acquaintance they would have difficulty in repressing signs of satisfaction.

"Wish now," he said desolately, "that I had made one or two friends."

It was a great relief to him when the lift had taken him up to his floor in Ashley Gardens and he was able to lock the dining room door upon himself. The two matronly servants did not hear him arrive, and they went on in high-pitched tones with a quarrel which was not really a quarrel, but a kind of sham debate, probably started to chase monotony. The elder of the two had been a servant with his parents; her voice made him think of his mother. One of Maybury's best traits, and one that he never revealed to the world, was his affection for the memory his mother; for the first time since her death he thought of the possibility of meeting her again.

"But she was a good woman," he said.

Was it too late to make some reparation for his acts of the last few years? The clock on the mantelpiece struck the hour and reminded him that there were no moments to waste. He went to the writing desk in the corner—there was a writing desk in every room in the flat—and unlocked the stationery stand. He opened his checkbook and laid it on the ledge, and for half an hour he wrote swiftly several letters. It was not possible to make amends to all the people to whom he had acted unfairly, but there were some who, by reason of their association with him, were now in distressed circumstances. To these he wrote letters which had for company a check.

"There seems," he said thoughtfully, after the half hour's work, "a good deal to clear up."

To Margaret Tearle he wrote a long, affectionate letter, the composition of which cost him some trouble; when he had finished it he thought for a moment and then tore it into many pieces, because he felt that it would give pain. He substituted a friendly little note, simply announcing his departure. Maybury had never made his will, because it had always seemed an absurdly premature thing to do. Now he took a sheet of paper and thought.

The elder servant, answering the ring, appeared in the dining room. Her

master was reading over the sheet of paper which he had written out, and he did not speak to her at once.

"Didn't know you were in, sir. Letters to post, sir? I'll send them down by the lift boy at once. Would you like dinner a little earlier?"

"Pack my bag, Martha, please. I'm going away to the south of France."

"Be away long, sir?" inquired the middle-aged servant. "Excuse my asking."

"I don't know when I shall be back," he said, wearily. "And Martha!"

"Sir?"

"Oblige me by witnessing my signature here, and call the other maid in to do the same. I have just been making my will."

He endorsed the document "Will and Testament of Arthur Maybury," and placed it in a corner of the desk. He went again to look at himself in the mirror, and felt gratified to find himself looking sane and normal; a tinge of color had returned to his face. He took the photograph of Margaret Tearle from an expensive frame and placed it carefully in his pocket. Then he looked through the square revolving bookcase for a volume which it seemed was not there, for he had to ring and disturb Martha in her work of packing his portmanteau.

"A Common Prayer Book!" echoed that astonished woman. "Certainly, sir, I can lend you one."

He found the service that he desired to read at end of the collection. It occurred to him that it was a piece of careful editing to begin with the Public Baptism of Infants, and to place the service for Burial of the Dead toward the end. He read the latter softly to himself, and tears came very near to his eyes now and again, for the words gave him memories. He had heard them read several times; it seemed queer that he had never till now thought of the occasion when they would be read over him.

"Your bag, sir," said Martha, bringing in the portmanteau, "and I don't think I've forgotten anything."

"Martha," he said.

"Yes, sir."

The middle-aged woman helped him with his coat.

"I am not very well, and I'm going away to—going away for the benefit of my health."

"Master Arthur! It's nothing serious, I hope?"

"I'm afraid I've been rather—rather a selfish master during the last few years. If at any time I have been harsh in speaking to you, if I have seemed to forget you were an old servant of my dear mother's, I want to ask your pardon."

"No, no, Master Arthur," said the woman, tearfully, "not that. You mustn't ask my pardon."

"I should like you to think of me," he said, "as I was when I was a boy, and—" He stopped for there was a choking in his throat. "Ring for a hansom," he said.

"I can tell, sir," said Martha quaintly, "that you're not well."

He looked around when the servant had gone and said farewell to the room. Opening his portmanteau, he found room for some letter paper and envelopes; there would be time, he hoped, out in the south of France to take further steps to right the wrongs that he had committed. For the first time he recognized the amazing change that the Harley street man's announcement had made in him; the quiet, thoughtful man, with a great affection in his heart for the world, seemed to have no relationship with the assertive, buoyant man who had left for the city that morning.

"Cab's waiting, sir," said Martha. "And there's a telegram."

"I won't trouble to open it," he remarked. "It's from my partner, I expect. I can't bother about business any more."

"It might be private, sir."

Only the thought that it might be from Margaret Tearle induced him as he stood in the passage waiting for the lift, to open the envelope. It was not from her.

"Can I see you at your room now?"

"JEYESON."



He scribbled hurriedly a reply on the back.

"No. Am leaving Charing Cross to-night's mail. MAYBURY."

"Please send that, Martha," he said. "Goodby."

"Goodby, Master Arthur," said the woman. "And I do hope you'll be back soon."

"Goodby."

He repeated these two words many times as the cab took him past the Abbey and up Parliament street. At Charing Cross there was time to spare, and feeling hungry he went into the hotel. Something to his surprise he found himself able to eat with admirable appetite; a small bottle of white wine added to his content. He felt half inclined to speak to the people who were eating at the next table, and to tell them that he had but six days to live in this world; to tell them that he was facing the certain thing with self-possession. One of the party commenced to brag solemnly about an attack of toothache, and Maybury smiled at the want of proportion.

He had taken his ticket, and was at the wooden barriers leading the Continental platform when he saw a clean shaven, anxious old gentleman scanning the faces of the passengers. He touched the shoulder of the man who was going through in front of Maybury.

"Excuse me," he said, "is your name Maybury?"

"Comment?" asked the man. "Vous dites?"

"My name is Maybury."

"Glad to have found you," declared the anxious old man. "My name is Jeyeson, of Harley street."

"I think 'not,'" said Maybury. "I saw that gentleman late this afternoon and you are certainly not he."

"My dear sir," cried the old man sharply, "do you think I don't know who I am?"

"Apparently you do not."

"I beg your pardon," he said apologetically. "I had forgotten. Very natural consequence of a very annoying circumstance. Tell me! You called at Harley street about four o'clock. I found your card there. You had an interview and you paid a fee. How much did you pay?" Maybury with some interest gave the information.

"He's a scoundrel!" declared the old man.

"Who?"

"My new man. I was out when you called; if you had gone into the waiting room the page boy would have told you so. I hope he did not give you a prescription?"

"He only told me," stammered Maybury, perplexed, "that I had but six days to live, and that I had better get away from London at once."

"Upon my word!" declared Dr. Jeyeson, "that was clever."

"But—was he wrong, then?"

"Wrong!" cried the concerned old man. "Of course he was wrong—all wrong. It has taken me ever since five o'clock to try to remedy the mischief that he in ten minutes managed to do to my practice. Drive back with me in my brougham."

Later the two sat in the doctor's private room in Harley street. Dr. Jeyeson, smoking a long cigar, had just concluded one of his best stories of an incident at Bart's. His guest was courteously amused, but he seemed to be thinking of other matters.

"And you feel sure that I am all right, doctor?" he asked for the fourth time.

"My dear sir," said Jeyeson emphatically, "you're as sound as a bell. Go slow; marry this charming young woman; settle down. Only thing I'm concerned about is that you will accept my apology for the shock you've had. I hope it hasn't done you any harm."

"Indeed," said Arthur Maybury, "I'm sure it has done me good!"—Sphere.

PROFANENESS is a brutal vice. He who indulges in it is no gentleman—I care not what his stamp may be in society, or what clothes he wears, or what culture he boasts. Despite all his refinement, the light and habitual taking of God's name in vain betrays a coarse and brutal will.—E. H. Chapin.

## Reproductive Art in the Home.

Lovers of the best and truest in art should be especially gratified by the general improvement in public taste in the matter of home adornment, which is now everywhere manifest. Not in the homes where wealth places all things within reach, but in those of the great middle class, and even in those of the comparatively poor, is this improvement conspicuous. The cheap chromo in its tawdry frame has for the most part disappeared and its place is filled by a neatly framed reproduction of some work of genuine merit and permanent value, and the effect is eminently ennobling and refining.

Photography has not yet received its full meed of praise as an educational factor, yet when one contemplates the wonderful changes which have been wrought by its use, he is compelled to accord it a place among the great achievements of the century.

The camera and the various half-tone, platinum and other inexpensive processes which are the outcome of its use have brought the world's masterpieces to thousands who otherwise would have had no acquaintance with them, save from printed descriptions, which necessarily are always inadequate. The illustrated lecture has for some years been a source of unflinching enjoyment for many who have longed to visit the wonder places of the world, yet have lacked the means to do so, and great improvements in the way of motion pictures and color effects have recently developed.

It is, however, in its effect upon the home that we would consider the subject of reproductive art at this time. An habitual observer, if an art lover, cannot but note with great satisfaction the change which has occurred therein. It is the exceptional home where one does not see at least two or three good subjects, though perhaps presented in a cheap form. Even advertisers, never slow to estimate the judgement of the masses, avail themselves of neat half-tones of genuine art subjects for the embellishment of the calendars, etc., sent out by them.

Framers too, are falling into line, and even the family portraits we sometimes condemn no longer appear dwarfed by the hideous monstrosities, by courtesy called frames, which surrounded them a few years since. Now, the frame, like the correct setting of a jewel, merely serves to enhance the beauty of a picture, rather than to obliterate it. With this advent of an era of better taste in art matters, there is less amateur dabbling in oils and water colors, which resulted in the impossible flowers and landscapes which glared at us from every side a few years since. The time thus worse than wasted is now oftener spent in study along higher lines and with more worthy results.

Children are influenced greatly by pictures. It is the exceptional little one who cannot be amused and interested by them, and as they receive many of their first impressions of objects from reproductions, it is essential that the latter be the best. Juvenile books have benefited greatly by the photographic processes and improved methods of drawing, etc., and illustration generally has made rapid strides. The picture books of a generation ago would be looked upon with contempt by the children of to-day, which is not a matter of regret to the writer, who is not of those who sigh for the "good old days."

Present days are more satisfactory, and those of the future promise even better things, for good taste is really an ethical quality and possesses great influence for good upon the mind and the life. The common, every-day people will acquire a refinement and delicacy of perception wholly unknown in the past, as more of beauty is placed within their reach, and cultivation of the finer faculties will serve to crowd from existence the sordid, the trivial and the base.—American Cultivator.

THE beautiful colors seen in the soap bubble arises from the fact that the bubble, being very thin, reflects light from both the outer and inner surfaces of the film.

## Circumstance.

Two children in two neighboring villages,  
Playing mad pranks along the healthy  
leas;  
Two strangers meeting at a festival;  
Two lovers whispering by an orchard wall;  
Two lives bound fast in one with golden  
ease;  
Two graves grass green beside a gray  
church tower,  
Washed with still rains and daisy blossoms;  
Two children in one hamlet born and bred;  
So runs the round of life from hour to  
hour.  
—Tennyson.

## Mother of the Immigrants.

Probably no two women in America come so close to a varied personal history as Mrs. Regina Stucklen, Chief Inspector of the Women's Department of the Barge Office, and well known as the Mother of the Immigrants, and her assistant, Miss Taylor, states a writer in Ainslee's Magazine. No church in all the metropolis solemnizes so many marriages as the Barge Office, and no matrimonial agent on earth arranges so many weddings as does Mrs. Stucklen; and beneath the majority of these there is a saving proportion of romance that leaveneth the whole heavy lump. Thus there are compensations even in the most arduous tasks and amid surroundings that are repellant to a refined feminine mind.

Personally, with great benignity and with signal absence of official fussiness, Mrs. Stucklen regards the wants of all the women. She learns not only whence each comes, but whither each wishes to go and what each purposes to do. Of the struggles with the great problems of existence in all countries and in all grades of social life, Mrs. Stucklen knows enough to fill volumes. The Mother of the Immigrants is a woman of strong personality, calm, firm and sympathetic under most trying situations, and to the would-be bride, who has arrived a stranger in a foreign land to meet her promised husband, she is at once counsellor, witness and friend. As about 300 marriages take place annually at the Barge Office, or directly under its auspices—one solemnization for every working day of the year—and as Mrs. Stucklen inquires into the immediate history of each matrimonial affair, she has more than an ordinary opportunity to study this interesting side of life. Whither they go and how they prosper after leaving her guardian care, the inspector has little opportunity of knowing—whether to found honorable and prosperous families, or to fail and fill the pauper's grave. Barely 1% of them ever retains enough grateful memory of her services to inform her. But there are rewards in knowing one's duty well done; and if there is a seeming ingratitude on the part of brides and grooms alike, it is because the Government, and the Barge Office as one of its institutions, is a thing of odium to the average immigrant—the thing from which he fled when he forsook his native hills and valleys; and the sorrows and tribulations of the detention pens the immigrant seeks to blot from his memory as speedily as possible.

## Things Women Do.

For years the male residents of Healdsburg talked of certain improvements which the town needed. Nothing came of the talk, and then the women took the matter up and formed a Ladies' Improvement Club. This organization has transformed the place, having by their active influence and organized labors procured for the town a municipal electric light plant, comfortable seats in the plaza, an intelligent name system for the streets, signboards with street names at all corners, a drinking fountain costing \$600. These improvements were brought about without increasing taxes, except for the two purposes first named.

THE married and unmarried women of the United States of Colombia, South America, are designated by the manner in which they wear flowers in their hair, the senoras wearing them on the right side and the señoritas on the left.

## DOMESTIC ECONOMY.

### Domestic Hints.

**BAKED PEARS.**—Pare and halve as many pears as will fill a two-quart baking-dish; cook in boiling water until tender, then remove from the stove. Make a small quantity of tart apple sauce, sweeten, and when cold place a tablespoonful into each half pear. Arrange them on a platter, and dust with powdered sugar and a small sprinkle of cinnamon.

**CHOCOLATE ICE CREAM.**—Put a pint of rich cream on to boil, together with four ounces of sweet chocolate, a half-pound of granulated sugar, and one-fourth teaspoonful of powdered cinnamon. Stir till smooth and perfectly free from lumps, and then strain, preferably through thin muslin. Now add one pint of milk, let it get thoroughly chilled and freeze. This is improved by a pint of whipped cream stirred in after it is frozen.

**CREAM OF SPINACH.**—Cream of spinach, celery, green peas or corn, are all made in the same way. Boil your vegetable till it is quite soft. Press it through a sieve, add three cups of milk to two cups of vegetables, strained, and thicken with the yolks of two eggs well beaten. Season with pepper and salt and a tablespoonful of butter, which is added bit by bit. Cook just long enough to set the egg, otherwise it will curdle. Just before serving stir in at least half a cup of cream, and not more than a whole cup.

**PEACH PUDDING.**—Fill a pudding dish with whole, peeled peaches, and pour over them two cups of water. Cover closely and bake until the peaches are tender; then drain off the juice from the peaches and let it stand till cool. Add to the juice one pint sweet milk, four well-beaten eggs, a small cup of flour which has one teaspoonful of baking powder mixed in it, one cup of sugar, one tablespoonful of melted butter and a little salt. Beat well and then pour this mixture over the peaches; bake until a rich brown, and serve with cream.

### Hints to Housekeepers.

A little sugar added to the water for basting meat improves its flavor.

Apple sauce is much improved by the addition of a tablespoonful of butter, and requires less sugar.

Don't fail to add a drop or two of vanilla flavoring to a pot of chocolate. It is a great improvement.

Our systems require for vigorous health all the elements which the succession of vegetables afford us; therefore we should eat freely of them all, from the first tender green of early spring to the tubers left us for winter's consuming. There are organic salts, acids and other elements in them which in no other form will so perfectly assimilate. Green vegetables preserve their color better if cooked uncovered in rapidly boiling water. Wilted or too old vegetables may be rendered more tender by the addition of a tiny bit of soda to the water in which they are boiled, but this is done to the detriment of their wholesomeness.

When tomatoes are really in market they should be in evidence in some form for breakfast, dinner and supper, for summer gives us no vegetable more enjoyable or healthful. Notwithstanding all the attacks made formerly upon its healthfulness, it is now firmly established as medicinal to the greatest degree. Who that loves them ever grew tired of them? For breakfast they are best simply skinned and sliced, to be eaten with salt, pepper and natural "vinegar," which is their juice. For dinner or luncheon they are perhaps most properly served cooked or in salad; for supper, in salad or plain sliced. For any meal, and particularly for breakfast, they are delicious fried if properly done. Never roll them in crumbs or dip them in batter, but roll them until well coated in flour well seasoned with salt, pepper and sugar. Fry to a rich brown on both sides. The slices should be thick, three to a medium-sized tomato.



## S. F. Market Report.

### Produce Market.

SAN FRANCISCO, Sept. 12, 1900.

#### CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Oct.	Nov.
Wednesday.....	73 3/4 @ 74 1/4	74 1/4 @ 74 3/4
Thursday.....	74 @ 74 1/4	74 1/4 @ 74 3/4
Friday.....	73 3/4 @ 74 1/4	74 @ 74 3/4
Saturday.....	73 3/4 @ 74 1/4	74 1/4 @ 74 3/4
Monday.....	74 1/4 @ 74 3/4	74 3/4 @ 75 1/4
Tuesday.....	74 1/4 @ 75 1/4	75 1/4 @ 76

#### LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	Sept.	Dec.
Wednesday.....	6s 11 1/4 d	6s 1 1/4 d
Thursday.....	6s 11 1/4 d	6s 1 1/4 d
Friday.....	6s 11 1/4 d	6s 1 1/4 d
Saturday.....	6s 11 1/4 d	6s 1 1/4 d
Monday.....	6s 11 1/4 d	6s 1 1/4 d
Tuesday.....	6s 11 1/4 d	6s 2 d

#### SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec., 1900.	May, 1901.
Thursday.....	1 08 3/4 @ 1 08 1/2	1 13 3/4 @ 1 13 1/2
Friday.....	1 08 3/4 @ 1 08 1/2	1 13 3/4 @ 1 13 1/2
Saturday.....	1 09 @ —	1 14 @ —
Monday.....	* — @ —	* — @ —
Tuesday.....	* — @ —	* — @ —
Wednesday.....	1 10 3/4 @ 1 09 3/4	1 14 @ —

\*Holiday.

#### WHEAT.

Fully one-half the current week has been given up in this center to California's Golden Jubilee celebration, leaving little time for business. As it was, there was mere time than business. More than was done the entire week could easily have been transacted in a single day. Shippers' needs were not as a rule very pressing or urgent, and a large portion of their limited buying was done in the country, the market in this center being kept in as dull and depressed condition as possible to enable buyers to operate to good advantage in the interior. Scarcity of ships and high freight rates, together with fair supplies of wheat abroad, continue to be discouraging features for the holding interest. There are hundreds of vessels tied up in transport service by the various governments at present engaged in war, and should peace hold sway in the immediate future, it would take considerable time for affairs on the high seas to adjust themselves to previous and normal conditions. While the immediate outlook affords little encouragement, there is not much probability of the market ruling any more unfavorable to the producing interest than it has for some time past. The United States visible supply east of the Rocky Mountains is given at 51,736,000 bushels, an increase for the week of 1,450,000 bushels.

#### CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, \$1.08½@1.10¾.	
May, 1901, delivery, \$1.13½@1.14¾.	
Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at \$1.10¾@1.09¾; May, 1901, \$1.14¾@—.	
California Milling.....	\$1 07½@1 10
Cal. No. 1 shipping, alongside.....	1 05 @—
Oregon Valley.....	1 05 @—
Washington Blue Stem.....	1 05 @1 10
Washington Club.....	1 02½@1 05
Off qualities wheat.....	1 00 @1 02½

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-1900.	1900-01.
Liv. quotations.....	6s 0 1/4 d @ 6s 1 1/4 d	6s 5 d @ 6s 5 1/4 d
Freight rates.....	33 3/4 @ — s	40 @ — s
Local market.....	\$1 05 @ 1 07 1/4	\$1 05 @ 1 06 1/4

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

#### FLOUR.

Business is not of extensive volume in this commodity at present, and as is to be expected with the existing condition of the wheat trade, there is an easy tone to the flour market. Quotations remain as last noted, but concessions to buyers are of common occurrence, especially where transfers of noteworthy magnitude are effected. Supplies are of fair volume.

Superfine, lower grades.....	22 25 @ 2 50
Superfine, good to choice.....	2 60 @ 2 80
Country grades, extras.....	3 15 @ 3 40
Choice and extra choice.....	3 40 @ 3 65
Fancy brands, jobbing.....	3 60 @ 3 75
Oregon, Bakers' extra.....	2 90 @ 3 25
Washington, Bakers' extra.....	2 90 @ 3 40

#### BARLEY.

While the amount of business transacted locally in this cereal the past week has been of light volume, the outward

movement has not been lacking. A shipment was made to China of 64,187 centals of barley, on account of the Russian Government. A British vessel clearing for London took 14,273 centals of barley as part cargo. Choice Chevalier is in active request at the advanced figures lately established, but with this exception there is no particular firmness to record. Ordinary feed qualities continue to be offered freely and in much larger quantity than the immediate demand warrants.

Feed, No. 1 to choice.....	70 @ 72 1/4
Feed, fair to good.....	65 @ 67 1/4
Brewing, No. 1 to choice.....	80 @ 85
Chevalier, No. 1 to choice.....	97 1/4 @ 1 02 1/2
Chevalier, No. 2.....	85 @ 90
Chevalier, poor.....	70 @ 75

#### OATS.

There is no activity to note in the market for oats, but prices continue in the main to be well sustained, holders as a rule preferring to carry stocks, rather than grant concessions of consequence to effect sales. Especially is the market for choice to select white oats as firm as at any previous date the current season.

White Oats, fancy feed.....	1 35 @ 1 40
White, good to choice.....	1 25 @ 1 30
White, poor to fair.....	1 15 @ 1 22 1/2
Gray, common to choice.....	1 15 @ 1 25
Milling.....	1 30 @ 1 37 1/2
Surprise, good to choice.....	1 30 @ 1 45
Black Russian.....	1 10 @ 1 25
Red.....	1 12 1/2 @ 1 30

#### CORN.

Spot supplies are of quite limited volume and, as for some time past, are principally Eastern product. Small Yellow is in very light stock and business in the same is necessarily of a retail character. Large Corn, both Yellow and White, is commanding very steady rates.

Large White, good to choice.....	1 22 1/2 @ 1 25
Large Yellow.....	1 20 @ 1 22 1/2
Small Yellow.....	1 50 @ —
Eastern, in bulk (carload lots).....	1 15 @ 1 17 1/2

#### RYE.

Not much arriving, neither is there active inquiry, except at lower figures than the majority of holders are willing to accept.

Good to choice, new.....	87 1/2 @ 90
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#### BUCKWHEAT.

There are no spot stocks and little or nothing upon which to base values. Quotations for the time being are wholly nominal.

Good to choice.....	1 90 @ 2 00
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#### BEANS.

Not many new crop beans have thus far come forward. Recent arrivals have been mainly Lady Washingtons or Large Whites, for which the market presents an easy tone, as it does also for Pinks and Bayos, these varieties being in most liberal spot supply. Buyers are holding off as much as possible, in anticipation of easier figures, while growers in most instances are not inclined to crowd stocks of above kinds to market at current rates. There have been transfers of moderate volume recently of new crop Garbanzos, and at tolerably easy figures, as compared with values which had been prevailing. Pea beans are at present wholly out of stock and Small Whites are in very limited supply.

Pea, fair to good, 100 lbs.....	— @ —
Small White, good to choice.....	3 75 @ 4 00
Lady Washington.....	2 40 @ 2 75
Pinks.....	2 60 @ 2 85
Bayos, good to choice.....	2 50 @ 2 75
Reds.....	3 00 @ 3 25
Limas, good to choice.....	5 15 @ 5 25
Black-eye Beans.....	2 75 @ 3 00
Horse Beans.....	1 75 @ 2 25
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 75

Advices by recent mail from New York give the following review of the bean market, prices quoted being per 60-lb. bushel:

The volume of business has not been quite up to last week, but between the export and home trade buying a moderate quantity of stock has been moved, and with very light receipts the previous advances were well sustained. Marrow have sold at \$2.12 1/2 @ 2.15 for the best goods, and close fairly steady at that. Medium have been particularly slow, with most sales at \$1.80. Some very choice have jobbed a little higher. Best lots of Pea have sold at \$2.05 @ 2.07 1/2, and while holders regard these figures as high for so late in the season and a large crop soon to be harvested, the small quantity of stock available at present has given them momentary advantage in the matter of price. A few hundred barrels of Red Kidney have gone to exporters this week, which has tended to strengthen holders' views a little. Most of the business has been at \$1.80 shippers' terms, but an occasional lot was placed at \$1.82 1/2. White Kidney steady but quiet. Yellow Eye slow. Some further speculative buying of Turtle Soup has cleaned up most of the stock and given us a higher market; last sale at \$1.50, but more is now generally asked. Lima very quiet at

\$3.52 1/2 @ 3.55. Foreign beans are working out rather slowly at about the same prices that have been quoted of late. Scotch peas have made a further sharp advance and close quite firm, but green have not shared in the improvement and there is now a wide difference between them.

#### DRIED PEAS.

Sales of Green or Blue peas from Salinas section have been made at \$2 per cental, being a sharp decline from figures lately current. Humboldt growers are in most instances contending for more money. A large portion of the crop is grown in latter section.

Green Peas, California.....	2 00 @ —
Niles Peas.....	1 75 @ —

#### WOOL.

Inactivity has been as pronounced in the local market since last review as for some weeks preceding, and advices from the East do not warrant anticipating any material change very soon for the better. Eastern markets are devoid of encouraging feature. Not until there is some noteworthy movement on the Atlantic side need any special life be looked for here. Some of the would-be prophets claim that the market will remain dull until after election, but there is no certainty that their prognostications will prove correct. Quotable values remain nominally as before.

	SPRING.
Humboldt and Mendocino.....	16 @ 18
Northern, free.....	14 @ 16
Northern, defective.....	11 @ 13
Middle Counties, free.....	14 @ 16
Middle Counties, defective.....	11 @ 13
Southern Mountain, 12 mos.....	8 @ 10
Southern Mountain, free, 7 mos.....	9 @ 11
Southern Mountain, defective, 7 mos.....	8 @ 10
Oregon Valley, fine.....	17 @ 19
Oregon Valley, coarse to medium.....	16 @ 17
Eastern Oregon, choice.....	15 @ 16
Eastern Oregon, fair to good.....	11 @ 14
Nevada, as to condition.....	11 @ 16

	FALL.
San Joaquin.....	7 1/2 @ 10
San Joaquin Lambs.....	8 @ 9

#### HOPS.

The harvesting of the hop crop is now well under way over the entire coast, but arrivals in this center so far have been light. Advices in the main are that the crop is turning out light as to quantity, but is averaging well as to quality. Bids up to 13c. are reported for choice new, with most growers contending for higher figures. There is every indication that there will be a fair export demand this Fall for desirable qualities.

Good to choice, 1900 crop.....	10 @ 13
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The following review of the hop market, from a New York authority, comes through by mail of late date:

Business on the local market has been very quiet again this week, but the light stocks remaining in first hands in this country and prospects of considerable shrinkage in the English crop tend to make a rather firm holding of most grades. We can make no material change in quotations, as the few transactions reported are in the range of these figures. New hops have not appeared on the market as yet. The weather has been very favorable to the ripening of the hops in New York State. It now looks as if we shall get good quality, and the quantity may be a little more than last year. Humphreys are now being picked and are coming down in fine shape. Some sales of Seedlings are reported at 15 @ 16c. Picking on the later crop will be general Monday. On the Pacific coast the crop looks very good. In California growers are picking. In Oregon they have begun on the early varieties and by September 1 picking will be general. Taking the coast as a whole, the outlook is toward a somewhat increased yield as compared with 1899. A few contracts have already been made, but as a rule growers are not at present inclined to sell. The German crop is estimated to be about up to last year. The English and Belgian crops are the only ones deficient. Several cables from London this week give varying estimates of 350,000 to 400,000 cwt., which is considerably below their requirements. Not over half a crop is expected in Belgium.

#### HAY AND STRAW.

The main feature of the hay market the past week has been the free outward movement, mainly on account of the Russian Government. A transport in the service of Russia took 6044 bales for Port Arthur, China. The last China steamer took 3231 bales, supposed to be mostly, if not wholly, for army use. Receipts were rather moderate the current week, and values for best were well sustained at previously quoted range.

Wheat.....	8 00 @ 12 00
Wheat and Oat.....	8 00 @ 11 00
Oat.....	7 00 @ 10 00
Barley.....	5 50 @ 8 50
Volunteer.....	4 50 @ 6 00
Alfalfa.....	6 00 @ 7 50
Stock.....	5 00 @ 6 50

Compressed.....	8 00 @ 12 00
Straw, 3/4 bale.....	25 @ 37 1/2

#### MILLSTUFFS.

There have been few decided changes in quotable values or the general tone of the market for the various kinds of millstuffs quoted herewith. Most descriptions were in ample supply for current requirements. Asking rates for Bran were advanced.

Bran, 7/8 ton.....	13 50 @ 14 00
Middlings.....	15 00 @ 18 00
Shorts Oregon.....	13 00 @ 15 00
Barley, Rolled.....	15 50 @ 16 00
Cornmeal.....	25 00 @ 25 50
Cracked Corn.....	26 50 @ 27 00

#### SEEDS.

Market is decidedly strong for Mustard Seed, both Trieste and Yellow, but more particularly the latter. The crop proved decidedly light, and the greater portion has been already placed. Prices for Flaxseed show no quotable change. The little doing in Bird Seed is at figures warranting no alteration in quotations.

	Per ctt.
Mustard, Trieste.....	3 50 @ 3 75
Mustard, Yellow.....	4 50 @ 4 75
Flax.....	2 00 @ 2 50
	Per lb.
Canary.....	3 1/2 @ 4
Rape.....	2 @ 3
Hemp.....	3 1/2 @ 4

#### BAGS AND BAGGING.

Grain bag market is inactive, as is generally the case at this time of year, and presents a weak tone. Wool Bags are in moderate request at former rates, with supplies ample. Fruit Sacks are receiving some attention at figures practically the same as have been current since the season opened.

Calcutta Grain Bags, huyer June-July.....	— @ —
Calcutta Grain Bags, spot.....	5 1/2 @ —
San Francisco Grain Bags, 22x36, spot.....	5 1/2 @ —
State Prison Bags in lots of 2000, 7/8 100.....	5 60 @ —
Wool Sacks, 4 lbs.....	— @ 33 1/4
Wool Sacks, 3 1/2 lbs.....	— @ 28 1/4
Fleece Twine.....	7 1/2 @ —
Gunnies.....	— @ 12 1/2
Bean Bags.....	4 1/2 @ 5 1/4
Fruit Sacks, cotton.....	6 1/2 @ 7 1/4

#### HIDES, PELTS AND TALLOW.

In the market for Hides and Pelts dullness and lack of firmness remain as pronounced as previously noted. Tallow is ruling steady, with stocks light.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	9	8
Medium Steers, 48 to 56 lbs.....	8½	7½
Light Steers, under 48 lbs.....	8	7
Heavy Cow Hides, over 50 lbs.....	8½	7½
Light Cow Hides, under 50 lbs.....	8	7
Wet Salted Klp.....	8	7
Wet Salted Veal.....	8	7
Wet Salted Calf.....	8½	7½
Dry Hides.....	15	12
Dry Kip and Veal, 11 to 16 lbs.....	15	12
Dry Calf, under 4 lbs.....	15	12
Salted Horse Hides, large.....	2 00	@ —
Salted Horse Hides, medium.....	1 50	@ —
Salted Horse Hides, small.....	1 00	@ —
Dry Horse Hides, large.....	1 50	@ —
Dry Horse Hides, small.....	75	@ 1 00
Dry Colts' Hides.....	50	@ —
Pelts, long wool, ¾ skin.....	1 00	@ 1 25
Pelts, medium, ¾ skin.....	70	@ 90
Pelts, short wool, ¾ skin.....	35	@ 60
Pelts, shearling, ¾ skin.....	30	@ 35
Deer Skins, best summer.....	27½	@ 30
Deer Skins, good medium.....	20	@ 22½
Deer Skins, thin winter.....	—	@ 10
Elk Hides.....	10	@ 12
Tallow, good quality.....	4	@ —
Tallow, No. 2.....	3	@ 3½
Goat Skins, perfect.....	30	@ 37½
Goat Skins, damaged.....	10	@ 20
Kid Skins.....	5	@ 10

#### HONEY.

There is a very healthy tone to the market, which bids fair to continue throughout the season. Spot supplies are light of all descriptions, and buyers are not lacking at full current rates.

Extracted, White Liquid.....	7 1/2 @ 8
Extracted, Light Amber.....	6 1/2 @ 7 1/4
Extracted, Amber.....	5 1/2 @ 6 1/2
White Comb, 1 lb frames.....	12 1/2 @ 13 1/2
Amber Comb.....	11 1/2 @ 12 1/2
Dark Comb.....	7 1/2 @ 9

#### BEE SWAX.

There is no lack of demand and prevailing prices are being well maintained.

Good to choice, light, 7/8 lb.....	28 @ 28
Dark.....	24 @ 25

#### LIVE STOCK AND MEATS.

All descriptions of live stock and fresh meats were in very fair request this week at prevailing figures, which remained virtually at same range last quoted for Beef and Mutton. Hogs have declined. Packers are looking for a still lower hog market in a week or two.

Beef, first quality, dressed, net 7/8 lb.....	6 @ —
Beef, second quality.....	5 1/2 @ —
Beef, third quality.....	5 @ —
Mutton—ewes, 6 1/2 @ 70; wethers.....	6 1/2 @ 7 1/2
Hogs, hard grain fed, medium.....	5 1/2 @ 5 1/2



Hogs, small, fat.....	5% @ 5 1/2
Hogs, large, hard.....	5% @ 5 1/2
Hogs, feeders.....	5 1/4 @ 5 1/2
Hogs, country dressed.....	6 1/4 @ 6 1/2
Veal, small, # lb.....	8 @ 10
Veal, large, # lb.....	8 @ —
Lamb, spring, # lb.....	8 @ 8 1/2

## POULTRY.

There was a good demand at close of last week for nearly all kinds of poultry in first-class condition, poulterers stocking up for the large number of visitors attending the Golden Jubilee celebration. Prices averaged a little higher than had been ruling, especially for chicken of desirable size and in good flesh. During the past few days the inquiry has been slower and the market has shown an easier tone.

Turkeys, live hens, # lb.....	11 @ 12
Turkeys, live gobblers, # lb.....	9 @ 11
Turkeys, Young, per lb.....	14 @ 16
Hens, California, # dozen.....	3 50 @ 5 00
Roosters, old.....	3 50 @ 4 50
Roosters, young (full-grown).....	3 50 @ 5 00
Fryers.....	3 00 @ 3 50
Broilers, large.....	2 75 @ 3 25
Broilers, small.....	2 00 @ 2 50
Ducks, old, # dozen.....	3 00 @ 4 00
Ducks, young, # dozen.....	3 00 @ 4 00
Geese, # pair.....	1 25 @ 1 50
Goslings, # pair.....	1 50 @ 1 75
Pigeons, old, # dozen.....	1 25 @ 1 50
Pigeons, young.....	1 75 @ 2 00

## BUTTER.

Accumulations of previous week showed considerable reduction and market was firmer in tone, especially for choice to select, which was in limited stock, and will continue so during balance of the season. Considerable trade is now on packed and cold storage butter, of which there is no scarcity.

Creamery, extras, # lb.....	24 @ —
Creamery, firsts.....	22 @ 23
Creamery, seconds.....	21 @ 22
Dairy, select.....	22 @ —
Dairy, seconds.....	18 @ 20
Dairy, soft and weedy.....	— @ —
Mixed store.....	15 @ 16
Creamery in tubs.....	20 @ 22
Pickled Roll.....	20 @ 21
Firkin, California, choice to select.....	20 @ 21
Firkin, common to fair.....	17 @ 18

## CHEESE.

Spot supplies are fairly liberal, and of the ordinary run of offerings are abundantly ample for immediate needs. Prices are without quotable change. For a little extra select, mild-flavored and in every way desirable for the most particular local trade, dealers are exacting a slight advance on best figures warranted as a regular quotation.

California, fancy flat, new.....	10 @ —
California, good to choice.....	9 @ 9 1/2
California, fair to good.....	8 1/2 @ 9
California Cheddar.....	— @ —
California, "Young Americas".....	9 1/2 @ 11

## EGGS.

Stiff prices are ruling for best qualities of domestic, largely owing to some sharp competition among buyers to secure consignments of this description. For common qualities of fresh there was no particular firmness, such stock having to come into direct competition with ordinary Eastern and store-gathered, of which there was an abundance.

California, select, large, white and fresh.....	32 @ —
California, select, irregular color & size.....	24 @ 30
California, good to choice store.....	17 @ 22
Eastern, as to section and grading.....	17 @ 24
Eastern, cold storage.....	— @ —

## VEGETABLES.

Most kinds in season were offered freely, the quotable range of prices remaining about as last noted, but market as a rule was lacking in firmness. Onions were in fair request for shipment; 2250 crates went outward for Australia via Victoria, B. C.

Beans, String, # lb.....	2 @ 3
Beans, Wax, # lb.....	2 @ 3
Beans, Lima, # lb.....	2 1/2 @ 3 1/2
Cabbage, choice garden, # 100 lbs.....	1 00 @ 1 25
Cauliflower, # dozen.....	50 @ —
Cucumbers, Bay, # box.....	20 @ 35
Egg Plant, # box.....	40 @ 65
Garlic, # lb.....	3 @ 3 1/2
Green Corn, # sack.....	75 @ 1 25
Green Corn, Alameda, # crate.....	1 25 @ 1 50
Onions, Yellow Danver, # cental.....	55 @ 75
Okra, Green, # box.....	30 @ 60
Peas, Sweet, garden, # lb.....	2 @ 3
Peppers, Green Chile, # box.....	30 @ 60
Peppers, Bell, # lb.....	35 @ 65
Pickle Cucumbers, No. 1, # cental.....	75 @ 1 00
Pickle Cucumbers, No. 2, # cental.....	40 @ 65
Squash, Summer, # large box.....	30 @ 40
Tomatoes, River, # large box.....	25 @ 40

## POTATOES.

There was a fairly active shipping demand and the market for desirable qualities inclined more in favor of sellers than immediately prior to date of last review. Prices throughout averaged better than preceding week, but the firmness of the market was confined more particularly to best stocks.

Burbanks, River, # cental.....	45 @ 70
Burbanks, Salinas, # cental.....	85 @ 1 05
Sweet Potatoes, Yellow, # cental.....	1 00 @ 1 65

## The Fruit Market.

## FRESH FRUITS.

Several kinds are showing decreased receipt, and are bringing improved figures in consequence, notably Pears and Peaches. The Bartlett Pear will soon be out, and is now in too scant supply to admit of wholesale trading. Peaches are still in moderate receipt, but very few are coming forward in bulk, and they are not likely to arrive in other than a small way during the balance of the season. Plums are not making much of a display, either as to variety or quantity, but prices obtainable in a regular way fail to show any marked change in favor of the producer. Apples are arriving more freely, making up partly for the falling off in supplies of Summer fruits, but it is the exception where the quality is of sufficiently high grade to draw forth much competition from buyers. Choice to select Apples are bringing very fair figures, and are likely to meet with a firmer rather than a weaker market as the season advances, but common qualities are being offered at low prices and these do not sell readily. Grapes for table use were about as plentiful on preceding week, but showed more difference in quality, there being in consequence a tendency to a wider range in prices; market at close was firm for choice. Wine Grapes were in light receipt, and although rather firmly held, did not meet with active custom at full current rates. The supply of Melons was liberal and the demand good. Berries were not in heavy stock, but the quantity was all that could be reasonably expected for this advanced date; still lighter receipts are looked for the coming week; prices for best qualities were well maintained.

Apples, fancy, 4-tier box.....	1 00 @ 1 25
Apples, good to choice, # 50-lb box.....	60 @ 90
Apples, common to fair, # 50-lb box.....	25 @ 50
Apples, Crab, # box.....	30 @ 60
Blackberries, # chest.....	3 50 @ 6 00
Cantaloupes, # crate.....	75 @ 1 25
Figs, # 1-layer box.....	30 @ 60
Figs, # 2-layer box.....	50 @ 1 00
Grapes, Tokay, # box.....	40 @ 65
Grapes, Seedless Sultana, # crate.....	90 @ 1 25
Grapes, Isabella, # crate.....	50 @ 1 00
Grapes, Rose of Peru, # box.....	40 @ 60
Grapes, Black Hamburg, # box.....	40 @ 60
Grapes, Zinfandel, per ton.....	19 00 @ 24 00
Grapes, Muscat, # box.....	40 @ 65
Raspberries, # chest.....	5 00 @ 8 00
Nectarines, Red, # box.....	60 @ 75
Nectarines, White, # box.....	40 @ 65
Nutmeg Melons, # crate.....	40 @ 65
Plums, ordinary varieties, # box.....	25 @ 40
Plums, fancy, # box.....	50 @ 65
Prunes, # crate.....	30 @ 50
Peaches, # box.....	40 @ 65
Peaches, wrapped, # box.....	70 @ 85
Peaches, Cling, # ton.....	20 00 @ 27 50
Peaches, Freestone, # ton.....	20 00 @ 27 50
Pears, Bartlett, # box.....	65 @ 1 25
Pears, common kinds, # box.....	30 @ 75
Pomegranates, # box.....	75 @ 1 00
Strawberries, Longworth, # chest.....	5 00 @ 8 00
Strawberries, Large, # chest.....	3 50 @ 6 00
Whortleberries, # lb.....	3 @ 5
Watermelons, # 100.....	8 00 @ 20 00

## DRIED FRUITS.

The week has been in the main an exceedingly quiet one in the cured and evaporated fruit trade. This is partly accounted for by the extensive holiday observance attendant upon the Golden Jubilee or fiftieth anniversary of California's admission to statehood. Not much business has been done, and changes in quotable rates have been few and in the main unimportant. Apricots are being firmly held, with offerings light, large purchases not being possible at full current quotations. Peaches are moving slowly and the market shows no special firmness, unless for strictly choice to select. In Pears not much has been yet done, and while the outlook for common qualities is not particularly encouraging, choice are not likely to lack for custom or to fail to command fairly good figures. Figs are being favored by the exclusion for the time being of the Smyrna product, the market showing decided strength for finely packed stock, suitable for the holiday trade. The standard of the California packed Fig is steadily improving. Some turned out this season compare very favorably with previous offerings of best imported. Apples are not in heavy spot supply, neither is there much demand for them. The large crop East does not warrant anticipating a very firm market for Apples this season. Strictly select are, however, more apt to bring remunerative figures than common qualities. In the Prune market there is some business reported on both domestic and foreign account, but foreign orders are being filled at a discount from domestic rates. Export prices are not officially made public, and are made for foreign delivery, cost, freight and insurance. They are reported to be 3/4 @ 1/2 c. under domestic, making the four sizes net the grower on foreign account 1 1/4 @ 1 1/2 c.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	6 1/2 @ 7
Apricots, Royal, choice, in sacks, # lb.....	7 @ 7 1/2
Apricots, Royal, fancy.....	9 @ —

Apricots, Moorpark.....	10 @ 12 1/2
Apples, in 50-lb boxes, rings, pressed, fancy.....	5 1/4 @ 5 1/2
Apples, 50-lb boxes, rings, pressed, good to choice.....	4 1/4 @ 4 1/2
Figs, White, fancy pressed.....	6 @ 7
Nectarines, # lb.....	4 @ 6
Peaches, unpeeled, fancy.....	6 1/2 @ 7 1/2
Peaches, unpeeled, choice.....	5 @ 6
Peaches, peeled, in boxes.....	12 @ 15
Pears, unpeeled Bartletts, halved, fancy.....	7 1/2 @ 8
Pears, halved, unpeeled Bartletts.....	5 1/2 @ 6 1/2
Pears, quartered, unpeeled Bartletts.....	5 @ 6
Plums, Black, pitted.....	5 1/2 @ 6 1/2
Plums, White and Red.....	6 1/4 @ 7 1/2
Prunes, Silver.....	4 1/2 @ 6

Prices for new crop Prunes, as named by the California Cured Fruit Association: Santa Clara, four sizes, 3c. per lb.; 40-50s, 7c.; 50-60s, 5 1/2 c.; 60-70s, 3 1/2 c.; 70-80s, 3 1/4 c.; 80-90s, 2 1/2 c.; 90-100s, 2 1/4 c.; 100-120s, 2c., which is the uniform price for this grade; Sonomas, other than smallest, 1/2 c. less; other districts, 1/4 c. less, except for smallest; Ruby, 1/4 c. premium.

## COMMON SUN-DRIED.

Apples, sliced.....	3 @ 3 1/2
Apples, quartered.....	3 1/2 @ 4 1/2
Figs, Black.....	2 @ 3
Figs, White.....	3 @ 3 1/2
Peaches, unpeeled.....	4 1/2 @ 5

Recent advices by mail from New York City furnish the following report of the dried fruit market:

Market continues very quiet on evaporated apples. The little business reported is in range of quotations, but outside figures full and only reached for high-grade fruit. Hardly any movement in sun-dried apples, and chops and waste also very quiet. New fruit for future delivery has a fair amount of attention at low prices. Evaporated apples have sold for October and November delivery at 1 1/4 c., November and December delivery generally 4 1/2 c., and some December delivery at 4 1/4 c. Choice Northwestern quarters in barrels quoted 4 1/4 c. for October and November delivery and 4c. for prime. Choice Southern quarters in bags worth about 3 1/2 c. for September and October delivery. Chops and waste quoted for futures at 1 1/4 c. for chops and 1c. for cores and skins. Further sales of North Carolina peeled peaches at 8 @ 9c., but little if anything doing in Georgia stock. Raspberries very firm and prices show further improvement. Huckleberries about steady. Blackberries increasing in supply and weak. Cherries in moderate supply and steady. California apricots are held firmly owing to strong primary markets, though outside quotations are full for important business. No new California peaches received as yet; choice worth about 5 1/2 @ 6c. on the coast, and sales could probably be made here at 7 1/2 @ 8c. Not much doing in prunes.

Apricots, Cal., Moorpark, 1900.....	10 @ 14
Apricots, Cal., 1900, # lb.....	8 @ 9
Peaches, Cal., unpeeled, in bxs, # lb.....	7 @ 8
Peaches, Cal., unpeeled, in bags, # lb.....	6 @ 7 1/2
Prunes, Cal., # lb.....	4 1/2 @ 6 1/2

## RAISINS.

Old are practically out of stock. Association prices for new pack have not yet been fixed. Outside Sultanias, bleached, are being sold for forward delivery at 7 1/2 c. in 50-lb. boxes.

## CITRUS FRUITS.

Lemons met with fair custom, but did not command materially better figures than last quoted, the supply proving ample. Limes were in fresh receipt from Mexico and market showed a little easier tone.

Lemons—California, select, # box.....	3 00 @ —
California, good to choice.....	2 25 @ 2 75
California, common to fair.....	1 25 @ 1 75
Limes—Mexican, # box.....	6 50 @ 7 00
California, small box.....	— @ —

## NUTS.

Almond market remains strong, with few obtainable. Prices for Walnuts have not yet been fixed; the market has a healthy tone. Peanuts are in small supply and fair request at ruling rates.

California Almonds, shelled.....	25 @ 27
California Almonds, paper shell, # lb.....	13 1/2 @ 14
California Almonds, soft shell.....	12 1/2 @ 13
California Almonds, hard shell.....	9 @ 9 1/2
Walnuts, White, soft shell.....	— @ —
Walnuts, White, California, standard.....	— @ —
Chestnuts, California Italian.....	— @ —
Peanuts, California, fair to prime.....	5 @ 6
Peanuts, Eastern, hand-picked.....	6 @ 6 1/2
Pine Nuts.....	5 @ 6

## WINE.

The general features of the Wine and Grape market are about as noted a week ago. Wine grapes continue in good request and are commanding much the same firm figures as have been current throughout the season, the quotable range of values for grapes for dry wines being \$16 @ 23 per ton. The grapes of two small vineyards near St. Helena were taken the past week at \$20 per ton. An item has been going the rounds of the press that Lachman & Jacobi were out of the market as buyers of either wine or grapes. This firm has recently built 100 tanks at Reedley, having a capacity of from 5000 to 25,000 gallons each. This does not look as though the firm in question has withdrawn, unless temporarily, from the wine

trade. The British ship Fingal, sailing this week for London, took 40,876 gallons and 51 cases wine.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, 1/4 sacks.....	130,423	1,069,003
Wheat, centals.....	91,244	988,365
Barley, centals.....	121,539	1,328,492
Oats, centals.....	29,527	223,356
Corn, centals.....	2,094	11,653
Rye, centals.....	—	53,553
Beans, sacks.....	1,210	26,805
Potatoes, sacks.....	36,031	280,412
Onions, sacks.....	10,300	44,904
Hay, tons.....	4,653	46,486
Wool, hales.....	1,130	8,559
Hops, bales.....	92	554

## EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, 1/4 sacks.....	44,836	533,576
Wheat, centals.....	128,622	918,933
Barley, centals.....	121,930	665,013
Oats, centals.....	202	22,800
Corn, centals.....	—	11,392
Beans, sacks.....	245	4,105
Hay, bales.....	3,231	7,149
Wool, pounds.....	—	233,621
Hops, pounds.....	7,692	72,182
Honey, cases.....	59	686
Potatoes, packages.....	2,657	11,591

## California Dried Fruit at New York.

NEW YORK, Sept. 12.—Evaporated apples common, 3 @ 4c; prime wire tray, 4 1/4 @ 5 1/4 c; choice, 5 1/2 @ 6c; fancy, 6 @ 8 1/2 c.

California dried fruits.—Market is fairly firm, but demand is not active.

Prunes, 3 1/2 @ 7 1/2 c.  
Apricots, Royal, 11 @ 14c; Moorpark, 15 @ 17c.  
Peaches, unpeeled, 6 @ 9c; peeled, 14 @ 18c.

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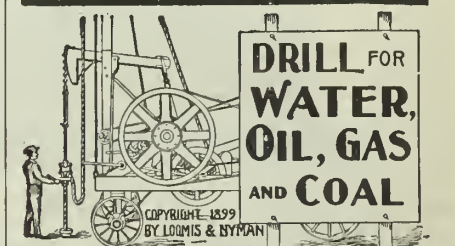
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## A Few Words

about

# Pain-Killer

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### Drying Figs.

(Continued from page 166.)

a long time, this dipping will rarely prevent fermentation, though it will prove advantageous in other ways. Figs with a rough and tough skin are especially benefited, the principal effect of the dipping being to soften the skin. But this dipping should be practiced only on figs of inferior quality, the best grades not being improved by either dipping or sulphuring.

In dipping, the figs should first be placed in a perforated bucket and rinsed in cold water to free them from dust. They should then be transferred to a kettle containing boiling lye made of one pound of potash to ten gallons of water. An immersion of from one-fourth to one minute suffices, the time being regulated according to the size of the figs and the pliability and thickness of the skin. Boiling salt water may be substituted for the lye water for the dipping of some figs, different varieties requiring different solutions to secure the desired result. After dipping, the figs are dried without rinsing. If salt or saltpeter are used instead of lye, 1½ pounds of either to fifty gallons of water is a proper quantity. Lye is generally used, but the writer prefers salt or saltpeter, either of which gives good results as regards pliability of skin, while the salty taste generally improves the flavor.

**DRYING ON TRAYS.**—For convenience in handling, wooden or paper trays are commonly used for drying. By their use the fruit can easily be stacked and sheltered in hot weather. The trays are of various sizes, but a small size, such as 2½x3½ feet, or 3½x4 feet, is preferable, as when filled with fruit it can easily be handled by one man, while a larger size requires two men. The drying ground should be a clean space outside the orchard, where the trays may be exposed to the uninterrupted rays of the sun. The figs require all the sunshine obtainable, and the drying ground must therefore be free from the shade of trees or buildings. The drying floor may consist simply of beds of soil elevated a foot above the general level. A drying floor 4 feet wide may be raised 8 inches additional along one side. The slope toward the sun thus given will insure greater heat. Trays may be placed on strips of wood or scantlings supported by long sawhorses. The sawhorses should be low enough to support two rows of trays abreast. Three scantlings or strips will be required for each pair of sawhorses. They should be of even lengths, as long as obtainable, and the middle one should be larger than the outside ones; 2x4 inches for the middle one and 2x3 for the side scantlings will be found convenient sizes. The figs should be placed singly on the tray, with their eyes all toward one side, and this side of the tray should be slightly raised in order to prevent the contents of very juicy figs from running out during the process of drying. The raising of the trays is the most easily accomplished by placing the 2x4-inch supporting strip in the middle of the sawhorses and the 2x3-inch strips on either side. Immediately after sulphuring, if that is practiced, or after

dipping, the fruit should be spread and the trays distributed on the racks, where they will have the full benefit of the hottest sun. This distribution of the trays should be finished before noon each day to secure the best color of the dried product.

The figs must be turned twice a day at first and once a day in the later stages of drying. The turning requires much labor and expense, as it can be done well only by hand labor. An inferior product may be turned by placing an empty tray face downward upon a filled one and inverting them, leaving the fruit on the new tray. To produce the best grade of dried fruit, the figs should not touch one another on the trays during the process of drying. During the turning, all inferior figs, such as those that ferment and puff up, should be culled out and used for vinegar. Figs which show a slight froth at the eye are turning sour and should be removed.

Covering the figs must not be neglected, if a choice article of dried fruit is to be produced. If white figs are left out over night uncovered, they will be discolored. Rain and dew are very damaging, and the fruit should be protected from them. This is best accomplished in California by stacking the trays one on top of another when rain is expected. The top and sides of the stacks should then be protected with empty trays. If permanent drying beds of gravel and cement are made, a mechanical device for covering the trays with a horizontal canvas curtain can be used, and in this way they can easily be covered every night.

**DEGREE OF DRYNESS.**—It is very important that drying cease when the figs have reached the proper stage for packing. They must on no account be overdried nor should they be removed from the trays too soon. The proper degree of dryness can be detected by pressing the figs between the thumb and finger. They should be soft and pliable, with the contents distinctly pulpy; and, when squeezed, the fig should not resume its former shape, but remain pressed. It should be plastic, not elastic nor dry. Underdried figs will spoil in packing, while overdried ones are hard, leathery and worthless as food or delicacy. The trays must be gone over every day and the properly dried figs taken off, the soiled ones being removed at the same time. The time required for drying varies from four to sixteen days. Drying within six or seven days yields the best quality of product.



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Sole Agents, - No. 123 California Street,  
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Telephone Main 199.  
**Blake, Moffitt & Towne,**  
DEALERS IN PAPER,  
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**AS much POTASH** should be given back to the land as the crop takes from it. Thirty bushels of wheat remove thirty pounds of actual POTASH; therefore 500 pounds of a fertilizer with 6 per cent. actual POTASH would be needed to feed the crop and keep the soil productive.



We have books giving full information about the use of fertilizers and Potash, and will mail them FREE to any farmer who asks for them.

**GERMAN KALI WORKS,**  
93 Nassau Street, New York.

**MEYER, WILSON & CO.,** San Francisco, Cal., are Sole Agents for the Pacific Coast.

# Gold Medal

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## CREAM

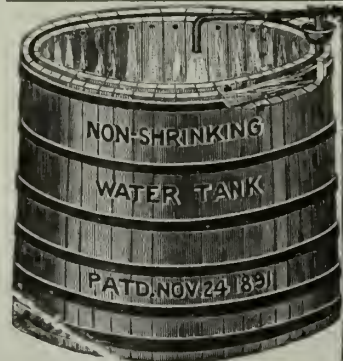
## SEPARATORS

AT THE

## Paris International Exposition of 1900.

## VERMONT FARM MACHINE CO.,

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When you buy a Water Tank get one that will not dry out and shrink.

**The Patent Non-Shrinking Water Tank.**  
The only one suitable for dry, hot climates.  
COSTS NO MORE THAN COMMON.

**SILOS and TANK WORK** of every description.  
**PACIFIC TANK CO.,**

Sole Manufacturers,  
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# KROGH CENTRIFUGAL PUMPS

## FOR IRRIGATION AND RECLAMATION.

Capacity up to 100,000 gallons per minute

They are made Horizontal and Vertical and Direct Connected to Steam or Electric Power.

IN USE ALL OVER THE PACIFIC STATES.

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## For All Lame Horses

whether they have  
spavins, ringbones,  
splints, curbs, or  
other forms of bony  
enlargement, use

**KENDALL'S  
SPAVIN  
CURE**

Cures without a  
blemish as it  
does not blister.  
As a liniment  
for family use,  
it has no equal.  
Price \$1, six for  
\$5. Ask your  
druggist for

Kendall's Spavin Cure, also "A Treatise on the  
Horse," the book free, or address  
**DR. B. J. KENDALL CO., ENOSBURG FALLS, VT.**



### Russia's Great Wheat Area.

The soil of the greater portion of the grain region of Russia and Siberia is well known in that country as the "Chernozem" or "black earth," says Bradstreet's. It is a broad belt or prairie, 600 to 700 miles in average width, beginning in Hungary and extending northeastward to the Ural mountains, and then eastward into Siberia to unknown boundaries. On the north and the west are the "gray forest lands," and on the south and west are salt and alkaline districts and sandy wastes, and finally the Caucasus and the Ural mountains. By both chemical and mechanical analysis the soil is shown to be remarkably similar to that of our own prairies, also commonly known by the similar term of "black loam." The depth is, on an average, probably a little greater than that of our prairie soil. From a chemical standpoint the soils of the two regions are similarly characterized (1) by an exceptionally large amount of thoroughly humified organic matter; (2) by the presence of an unusual proportion of phosphoric acid; and (3) by a great amount, comparatively, of lime, potash and other alkalies. These soils, are, therefore, alkaline, while many others, especially of forest regions, are acid. It is well known that the substances thus more abundant in these soils than in others are just those usually needed by the wheat plant.

### French Gambling in Wool.

On the first of September the two great French centers of the manufacture of woolen goods—Roubaix and Toureing—were in the throes of financial disaster, due to reckless speculation. The wool gambling fever took hold of the business houses last summer, when wool rose steadily without any apparent reason, until in August the price reached the high water mark of 6 francs 70 centimes per kilogram. Speculators for a time lost their heads, and there were daily purchases of 1,000,000 to 1,500,000 kilograms. The manufacturing business was dislocated owing to the extraordinary fluctuations in the price of material.

Abundant warnings were given that the fictitious values would inevitably lead to a slump, but they were unheeded until the collapse occurred, and wool on September 1 stood at 2 francs per kilogram below the August price. The amount of wool bought blindly by Roubaix and Toureing firms reached the fabulous total of 40,000,000 kilograms, which means a deficit of 80,000,000 francs. Thirteen houses are already in the hands of receivers, one house alone losing 8,000,000 francs, and several others are tottering, but efforts are being made in Paris to help them over the stile.

### Hatching Snake Eggs.

J. F. O'Keefe, secretary of the Oak Hill Cemetery Co., secured a snake's nest which was unearthed in opening a Chinese grave at the cemetery recently. The nest is composed of straw and twigs woven together after the manner of a bird's nest, though large enough to accommodate a full-grown hen. The eggs are sixteen in number, of a bluish white color, and are of the size of the first egg of a very young pullet, or about the size of a pigeon egg. The only noticeable difference between them and pullets' eggs is

that, while each egg is perfect in itself, they are attached to one another, as if with glue. They are supposed to have been laid by a gopher snake. Mr. O'Keefe will attempt to have them hatched under a hen. If the experiment is a success there will be a terribly surprised hen on the O'Keefe place one of these days.—San Jose Mercury.

### The Fastest Stallion in the World.

At Hartford, Conn., on Sept. 5th, the big event in the racing of the grand circuit was the trial of Cresceus, owned by the Ketchum farm of Toledo, Ohio, to beat the world's stallion record by Directum of 2:05½. Cresceus was driven by Geo. H. Ketchum and was urged by Joe Patchen, driven by Dickerson, and by a running horse driven by Walker. Dickerson coached the horse to the half alone, when Walker came on with his runner, both pushing him at the flank to the wire.

Cresceus did not make a skip in the mile, and the time by quarters was: 0:31½, 1:02½, 1:33½, 2:04½, beating the record with apparent ease, finishing strong and not in the least blown. Cresceus was brought back to the stand amid the greatest enthusiasm. The management gave \$1000 for the performance.

The first book printed in the United States was an almanac at Cambridge in 1639 by Stephen Daye, who established the first printing press in this country. The second publication was a slip containing a poem entitled "The Freeman's Oath." The next book was a metrical version of the psalms called the "Bay Psalm Book," in 1640. Copies are very rare. It is one of the most valuable books in the world.

**WE BUY** lamp-chimneys by the dozen; they go on snapping and popping and flying in pieces; and we go on buying the very same chimneys year after year.

Our dealer is willing to sell us a chimney a week for every lamp we burn.

Macbeth's "pearl top" and "pearl glass" do not break from heat; they are made of tough glass. Try them.

Our "Index" describes all lamps and their proper chimneys. With it you can always order the right size and shape of chimney for any lamp. We mail it FREE to any one who writes for it.

Address **MACBETH, Pittsburgh, Pa.**

### 9 CORDS IN 10 HOURS



By one man, with the FOLDING SAWING MACHINE. It saws down trees. Folds like a pocket knife. Saws any kind of timber on any kind of ground. One man can saw MORE timber with it than 2 men in any other way, and do it EASIER, 175,000 in use. Send for FREE illustrated catalogue showing latest IMPROVEMENTS and testimonials from thousands. First order secures scenery. Address **FOLDING SAWING MACHINE CO., 55-57-59 No. Jefferson St., CHICAGO, ILL.**

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Open All Year. **A. VAN DER NAILLEN, Pres't.**  
Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. Established 1884. Send for Circular.

**FOR SUGAR PRUNE, BARTLETT AND CLIMAX PLUM BUDS**  
—WRITE TO—  
**FANCHER CREEK NURSERY, Fresno, Cal.**

## GRAND PRIZE PARIS EXPOSITION

**THE** De Laval "Alpha" Cream Separators have just been awarded the **GRAND PRIZE** at the Paris Exposition, over a large number of separator exhibits from various countries.

### THE DE LAVAL SEPARATOR CO.

RANDOLPH & CANAL STS.,  
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103 & 105 MISSION ST.,  
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General Offices:  
74 CORTLANDT STREET,  
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MONTREAL.

## What are Your Cows Worth?

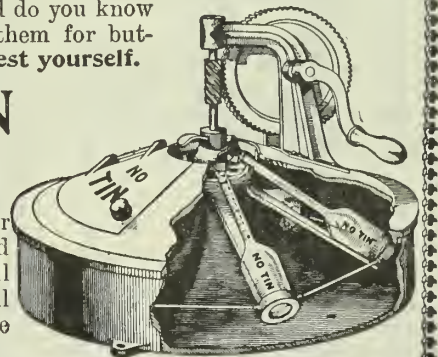
Do they pay you a profit, and do you know how much? Have you tested them for butter fat? **You can make the test yourself.**

## The NO-TIN Tester

is made in six-bottle size for farmer's use; it is driven by hand and is substantially built. Will last a life-time; fitted with ball bearings, and it does not rattle and does not wear out.

It uses the ordinary Babcock bottle and it does accurate work. Send now for our Catalogue, No. 70.

**ELGIN MANUFACTURING CO., Elgin, Illinois.**



## BARNGROVER, HULL & CO.,

(SUCCESSORS TO CUNNINGHAM & BARNGROVER.)

## Fruit Dealers' and Packers' Supplies.

We would call special attention to our Dried Fruit Graders and Hand Machine Power Processor, Boxing Hoppers and Elevators and Fruit Presses.

We have had a very heavy run on these goods and believe it will pay you to write or see us. **WRITE FOR CATALOGUE.**

Telephone: **JAMES 2341.**

**SAN JOSE, CAL.**

**GASOLINE  
ENGINES,  
2 1/2 to 12  
H. P.  
SEND  
FOR  
CATALOGUE**

**TANKS  
HORSEPOWERS  
GEM  
CATALOGUE  
MAILED  
FREE**



**WOODIN & LITTLE**  
312-314 MARKET ST. SAN FRANCISCO, CAL.

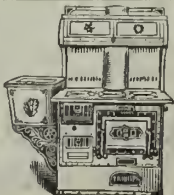
DEALERS IN  
WIND MILLS, GASOLINE ENGINES, PUMPS FOR HAND,  
WIND MILL, POWER, IRRIGATION AND ALL PURPOSES  
IRON PIPE FITTINGS, TOOLS, ETC.



## \$50.00 RANGE FOR \$25.00

TO INTRODUCE OUR

**TRIUMPH STEEL RANGE** into every section of the United States, we will for a short time deliver at your depot free of charge our highest grade Steel range for \$25.00. The regular retail price is \$50.00. It has six 8-inch lids. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21 1/4 inches deep, and 15-gallon reservoir. Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet. Best Range made. **WM. G. WILLARD, Manufacturer, 619 N. Fourth St., St. Louis, Mo.** Will ship O. O. D. with privilege of examination.







## Patrons of Husbandry.

### Napa Grange.

The State Grange will convene at Los Gatos for the regular annual meeting on the first Tuesday of October. Worthy Master Renwick and wife will represent Napa Grange. Brother and Sister Swift were elected alternates. One or two other members will be in attendance. The following resolution was adopted at the last meeting of Napa Grange:

WHEREAS, along the roadsides throughout this county several varieties of noxious weeds are allowed to grow without abatement, greatly to the inconvenience and injury of farmers on account of their spreading to adjoining fields; and

Whereas, certain kinds of these weeds which have already spread over a large area of the valley are rapidly encroaching upon cultivated lands, thereby working great injury; therefore be it

Resolved, By Napa Grange, No. 307, P. of H., meeting in regular session, that said organization and the individual members thereof use every honorable means for the passage by the next Legislature of a Noxious Weed Law, which shall provide for the eradication of all noxious weeds along the borders of our highways, as has been done by several of the older States of the Union.

Resolved, That this matter be sent up from this Grange to the State Grange for its consideration.

It was also resolved that a copy of the above be sent to the Board of Supervisors of this county with the request that they take such steps toward keeping our highways free from noxious weeds as they may deem best.

### A New Grange.

A new Grange was organized in Pope Valley, Napa county, Saturday, Sept. 1st, and the following officers were installed by D. M. Winans of Petaluma, deputy organizer: Master, W. W. Caffield; Overseer, J. Young; Lecturer, F. Beyersdoff; Steward, A. Fester; Assistant Steward, Cleveland Hardin; Chaplain, L. H. Sweitzer; Secretary, E. B. Wright; Gatekeeper, N. Boothe, Pomona, Mrs. T. S. Harding; Flora, Mrs. G. Sweitzer; Ceres, Mrs. E. Young; Lady Assistant Steward, Miss M. B. Harvey.

### Canning Fruit.

A safe and reliable way of canning soft fruits is by steaming them in a large kitchen steamer; but if such a steamer is not available, boil them in a common wash boiler. Press the fruit compactly into the cans, place the covers on, omitting the rings and rubbers, and immerse them in water up two-thirds of the way to the top of the cans. Place a board, or a couple of brown towels, in the bottom of the boiler, set over a brisk fire and boil an hour after it begins to boil. In the meantime have a syrup made by boiling the required amount of sugar per can in boiling water, allowing perhaps nearly a cupful of water to one or more of sugar, depending somewhat upon the fruit one is canning. Remove a can at a time, and fill to overflowing with the prepared syrup; put on the rubber, then the cover and ring; screw down tightly and the work is done never to be repeated, as it is impossible for fermentation to take place if the cans are perfect and these directions are closely followed.

To add a handful of raisins to each can of currants when canning them, adds greatly to their flavor.

## ALMOND HULLERS

—For Sale by—  
A. O. RIX, Irvington, Alameda County, Cal.

UNSLAKED lime is best suited for removing mould in cellars. It is blown, in the shape of fine powder, on the walls of the cellar and into the joints and crevices by means of the bellows, or else thrown on with the hand. The walls must be damp; dry walls have to be well moistened previously. The lime slakes with the adhering water and kills all organisms. On the day following the walls are washed off, and as experience has proved, the cellar will remain free from mould for at least two years.

## Breeders' Directory.

### HORSES AND CATTLE.

**HOLSTEINS**—Winners over Jerseys of EVERY butter contest at State Fairs for last six years. Aged, 4-yr., 5-yr. and 2-yr.-old classes, except 1st on 2-yr.-old in 1895. Last year every butter prize awarded won by my herd, except 2nd for 2-yr.-olds. 21 Jerseys and Durhams competing. F. H. Burke. 626 Market St., S. F.

**BULLS**—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times, either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

**PETER SANE & SON**, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs. Correspondence solicited.

**JERSEYS, HOLSTEINS & DURHAMS**. Bred specially for use in Dairy. Thoroughbred Hogs. Poultry. William Niles & Co., Los Angeles, Cal. Breeders and Exporters. Established 1876.

**J. H. GLIDE**, Sacramento, Cal. Have 70 choice Durham Bulls for sale.

**JERSEYS**—The best A.J.C.C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale

### POULTRY.

**WELLINGTON'S IMPROVED EGG FOOD** for poultry. Every grocer and merchant keeps it.

**SANTA TERESA POULTRY FARM**, Eden Vale. Santa Clara Co., Cal. Illustrated catalogue and guide free. Agents Eclipse Aluminum Leg Bands and Rabbit Labels.

**WILLIAM NILES & CO.**, Los Angeles, Cal. Poultry, Belgian Hares. Imported pedigree stock.

**MANHATTAN POULTRY & STOCK FOOD** is best. All grocers. Depot, 1253 Folsom St., S. F.

### SWINE.

**P. H. MURPHY**, Perkins, Sac. Co., Cal. Breeder of Shorthorn Cattle and Poland-China Hogs.

**BERKSHIRE, POLAND-CHINA & DUKOC HOGS**. Choice; Thoroughbreds. Wm. Niles & Co., Los Angeles, Cal. Established in 1876.

**J. P. ASHLEY**, Linden, San Joaquin Co., Cal. Breeds Berkshire, Poland-China and Essex Hogs.

### SHEEP AND GOATS.

**C. P. BAILEY**, San Jose, Cal. Angora Goats and Persian Fat-tailed Sheep. Catalogue free.

### BREEDERS' SUPPLIES.

**HENTERTH**, Blood Meal, Bone, Chick Feed; circular free, or 4 samples, prices, etc., mailed for 5c postage. Poultry, Pigeon and Belgian Hare Supplies, Incubators, etc. Croley, 506 Sac'to St., S. F.

## FANCY POULTRY.

We keep all the leading varieties. Have 60 breeding yards. Why not improve your stock. Man's of the Improved Pacific Incubator. Absolutely self-regulating, hot water. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember the Best is the Cheapest.

**PACIFIC INCUBATOR CO.**,  
1317 Castro Street,.....Oakland, Cal.



## Pacific Steel Handy Wagon.

**WHEELS**.....28 and 34 inches high.  
**TIRES**.....4 and 5 in. wide, 1/2 in. thick.  
**AXLES**.....1 1/2 inch, solid steel.  
**BOLSTERS AND AXLE STOCKS**.....White oak.  
**CAPACITY**.....Guaranteed 5000 lbs.

## HOOKE & CO.,

26-18 DRUMM ST., SAN FRANCISCO.  
Made by The Shunk Plow Co., Bucyrus, O.

## Great Combination Sales

STOCK YARDS, KANSAS CITY.  
UNDER AUSPICES OF  
**NATIONAL ASSOCIATIONS.**  
**250 HEREFORDS** OCT. 22 TO 26 1900  
**150 SHORT HORNS** OCT. 18 TO 20 1900



**TWO GRAND NATIONAL EXHIBITIONS**  
**600 Show Cattle 600**  
**HEREFORDS** OCT. 15-26 1900. **SHORT HORNS**  
**CASH PRIZES OFFERED \$25,000 00.**  
**EXCURSION RATES ON ALL RAILROADS.** **KANSAS CITY HORSE SHOW OCT. 21-27, 1900.**  
**FOR CATALOGUE OF HEREFORDS ADDRESS C.R. THOMAS, SECY. INDEPENDENCE, MO.**  
**FOR CATALOGUE OF SHORT HORNS ADDRESS J.H. PICKRELL, SECY. SPRINGFIELD, ILL.**

## P&B Building Paper.

A perfect insulation for cold storage houses and refrigerators. Unequaled in residence construction. A protection against heat, cold, dampness, dust, draught and vermin. Demand it of your dealer — you need it in your buildings.

Paraffine Paint Co.—116 Battery, San Francisco

## PASTEUR VACCINE

is the original and successful preventive remedy for

# ANTHRAX.

Write for particulars, official endorsements and testimonials from stock raisers who have successfully used PASTEUR ANTHRAX VACCINE in the United States since 1895 and protected their stock against Anthrax.

## PASTEUR VACCINE CO.,

213 Examiner Bldg., SAN FRANCISCO.

54 Fifth Ave., CHICAGO.

NITRATE IS OF PRIME VALUE IN THE GROWTH OF

## NITRATE OF SODA AS A FERTILIZER.

**Citrus Fruits, Wheat, Sugar Beets, Deciduous Fruits, Cereals, Garden Vegetables, Etc., Etc.**

**EXPERT OPINION**—Dr. Bernard Dyer (Consulting Chemist of Various British Agricultural Societies), writes: "Nitrate of Soda is not a mere stimulant, as was erroneously supposed in earlier days. It is a true and very profitable plant food, and when it is properly used it neither exhausts nor injures the soil, but improves both its condition and its fertility."

For Sale by **BALFOUR, GUTHRIE & CO.**, 316 California St., San Francisco.

Write to them for pamphlets on Nitrate of Soda as a Fertilizer.

## THE LYNWOOD HERD OF SWINE

has been pretty well cleaned out of salable pigs and we have but a few young litters on hand. Our stock is now being put into show condition and we cordially invite every visitor to the State Fair to call at our pens and see the kind of stock we keep. It has always been one of the sights of the Fair and we hope to improve on former exhibits.

In answer to inquiries we will describe any stock we think will suit you.

**SESSIONS & CO.**, 117 E. 23rd St., Los Angeles, Cal.

**Dewey, Strong & Co., Patent Agents,**  
330 Market Street, San Francisco, Cal.



## KILLED=DEAD.



You know that the horse buyer knocks off \$50 or more for every lump or blemish on a horse. Get full value for your horse—don't have any lumps. Cure him with

### Tuttle's Elixir.

It is guaranteed under a forfeit of \$100, to cure any case of horse ail, curb, splints, contracted cord, calicouses, thrush, etc. Used and Endorsed by Adams Express Company. TUTTLE'S FAMILY ELIXIR cures rheumatism, sprains, bruises, etc., kills pain instantly. Our 100-page book, "Veterinary Experience" FREE. Tuttle's Elixir Co., 437 O'Farrell St., San Francisco, Cal. Beware of so-called Elixirs—none genuine but Tuttle's. Avoid all bilsters; they offer only temporary relief if any.

## FORESTRY.

### The Big Trees.

The Department of Agriculture has issued a report on investigations of the big trees of California that brings out some interesting new conclusions. It shows that the dimensions of the larger trees are unequalled; that their age makes them the oldest living things. They are described by the report as "the grandest, largest, oldest and most majestically graceful of trees and the scarcest of known trees, with the extreme scientific value of the best living representatives of a former geological age."

The report says the bark of the big trees often is two feet thick and almost non-combustible. "The oldest specimens felled," it says, "are still sound at heart and fungus is an enemy unknown to it. Yet the big trees apparently have not increased their range since the glacial epoch. They have only just managed to hold their own on the little strip of country where the climate is locally favorable."

Continuing, the report says: The only grove now thoroughly safe from destruction is the Mariposa, and this is far from being the most interesting. Most of the other groves are either in process of or in danger of being logged. The very finest of all, the Calaveras grove, with the biggest and tallest trees, the most uncontaminated surroundings, and practically all the literary and scientific associations of the species, was purchased easily by a lumberman, who came into full possession on April 1st. The Sequoia and General Grant national parks, which are supposed to embrace and to give security to a large part of the big trees, are eaten into by a saw-mill each and private timber claims amounting to a total of 1173 acres.

The rest of the scanty patches of big trees in Calaveras, Tuolumne and Tulare counties are now disappearing—by the ax. In brief, the majority of the big trees of California are owned by people who have every right—and, in many cases, every intention—to cut them into lumber.

The most recent investigations, according to the report, confirm the estimates that these giant trees probably lived 5000 years or more, though few of even the larger trees are more than half as old. The average rate of growth is estimated at 1 inch of diameter for every twelve years. The report also corroborates the statements of one authority who says that one tree on which he counted 400 rings was undoubtedly in its prime, "swaying in the Sierra winds when Christ walked the earth."

The report states, among other things, as the result of official investigations: "The only place in the world where the big tree exists is in ten isolated groves on the west slope of the Sierra Nevada mountains. The species, however, represent a surviving prehistoric genus of tree once growing widely over the globe. The southern groves show some reproduction, through which there is hope of perpetuating these groves. In the northern groves the species hardly holds its own."

FARMER MILES, the celebrated and world-renowned animal castrator and spayer, who has lectured and demonstrated in the London Veterinary College, French Veterinary College, Glasgow (Scotland), Montreal (Canada), Boston and Chicago Veterinary Colleges, is now lecturing and demonstrating at the San Francisco Veterinary College, where he will castrate ridgebills free of charge not to exceed ten in number. Arrangements can be made for private work by applying to M. L. Pancoast, secretary San Francisco Veterinary College, 510 Golden Gate Ave.

## SHORTHORNS-HEREFORDS.

Great Combination Show and Sale. Six Hundred Specially Selected Animals at Kansas City, October 15 to 26, 1900.

The attention of all beef cattle breeders, feeders and shippers is called to the announcement elsewhere in this issue wherein one finds that 600 head have been selected under the auspices of the American Shorthorn Breeders' Association and the American Hereford Breeders' Association for inspection by the cattle breeders and general farmers of the country. Four hundred head—150 Shorthorns and 250 Herefords—consisting of bulis, cows and heifers, will be offered at public auction without reserve or by-bid to the highest bidder, thereby affording the prospective buyer already engaged at breeding his favorite kind, or of the beginner in making a choice as between the merits of the two breeds to make selections at his own price.

At no time within the past 20 years has the demand been stronger or more remunerative for the better class of beef cattle than at the present time. The acknowledged shortage in this country and that of other countries that contribute to the demands of the beef consuming peoples of the world guarantees remunerative prices for years to come. Not only is this true, but the best always tops the market whether the demand is great, just normal as compared with other industries, or below a general average. The feeders of the present day throughout the great corn belt of this country know from practical experience that the pedigreed animal or his immediate descendants take on flesh more rapidly, weigh more when they are finished and always bring the better price, insuring the most profit on a feed lot investment. The final end is beef and an increase of pounds of the better quality in the shorter time ought to bring about a decision as between those commonly bred or the improved animal, such as will be sold in October at Kansas City. Consult the announcement and write for a free copy of each catalogue, wherein will be found many details concerning the greatest show and sale held in recent times in this or any other country. W. P. BRUSH.

### List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO., PIONEER PATENT SOLICITORS FOR PACIFIC COAST.

FOR THE WEEK ENDING AUG. 28, 1900.

- 656,801.—RIVETING MACHINE—J. H. Batcher, Sacramento, Cal.
- 656,767.—BALING PRESS—C. Dodge, Davisville, Cal.
- 656,815.—RIVETING MACHINE—S. Forman, Sacramento, Cal.
- 656,776.—GAGED FEEDING JOGGER—R. H. Pratt, Portland, Or.
- 657,037.—HOSE COUPLING—A. M. Spickelmier, Tualatin, Or.

### Deafness Cannot Be Cured

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube is inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed, Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that can not be cured by Hall's Catarrh Cure. Send for circulars, free.

F. J. CHENEY & CO., Toledo, O. Sold by Druggists, 75c. Hall's Family Pills are the best.

HE who wishes to exert a useful influence must be careful to insult nothing. Let him not be troubled with what seems absurd, but concentrate his energies to the creation of what is good. He must not abolish, but build. He must raise temples where mankind may come and partake of the purest pleasures.—Goethe.

## Cooper's Sheep Dip.

Leading Dip of the World Sixty Years.

USED ON 150,000,000 YEARLY.

Not a refuse product of tobacco or dye factories. A sheep dip invented and made specially for sheep. You are asked to use it because it is the best. It occupies a supreme position in all countries. It is free from objections so common in others. It cures without injury. No smell.

General Agents, SHOOBERT-BEALE CO., 222 SANSOME ST., SAN FRANCISCO.



## GLENN RANCH,

Glenn County, :::: California,

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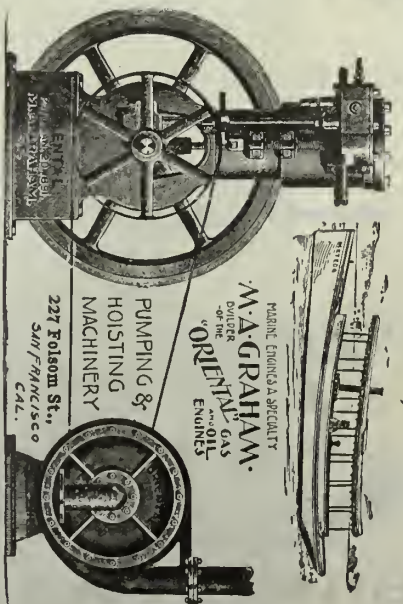
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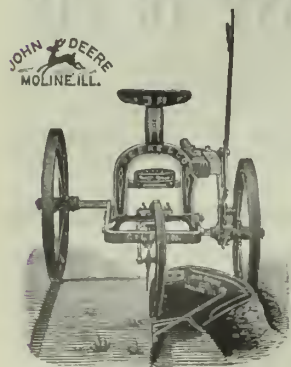
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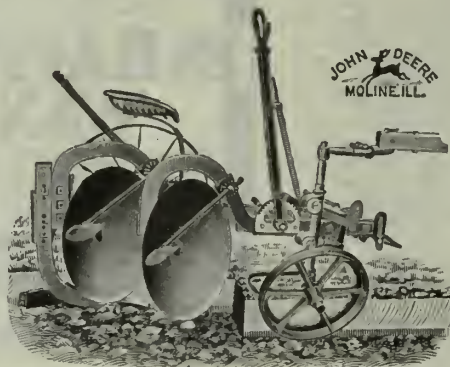


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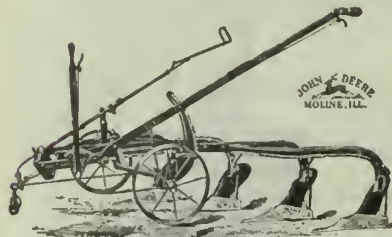
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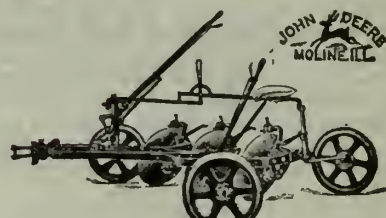
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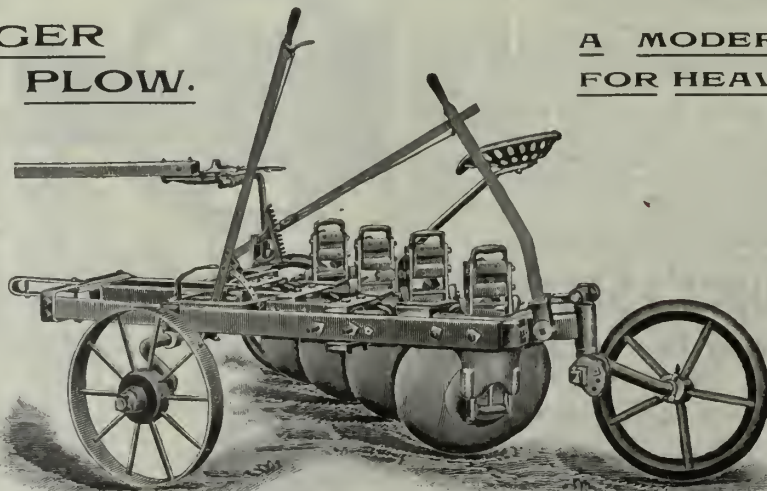
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 12.

SAN FRANCISCO, SATURDAY, SEPTEMBER 22, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

### From the Sierra to the Sea.

It is appropriate to the enthusiastic commemoration of the birth of the State of California which was last week so widely indulged in, that we should choose for this week's illustrations two scenes which are not only beautiful in themselves, but also significant of the resources, activities and prospects of the State. The trite descriptive term of the orator which we have written above, really means more than geographical definition; it may rightly be taken to convey more than that to the thinking mind.

The characteristic Sierra view caught in the photographic picture suggests the great protective mountain barrier along our eastern border, which deflects from California the most undesirable movements of the meteorological elements of the interior, and constitutes our State a semi-tropical region of exceptional salubrity and suitability for products of particular value and importance. Another great service of the Sierra lies in the arrest of eastward cloud movements from the Pacific and reception of the vast volumes of water in the deep snowfalls on the high altitudes. This water favors the grand forest growths of the mountains, which in turn conserve the water for the summer flow of the rivers. All these things are suggested by the picture of the rocky rift in the Sierra. In this case it happens to be a scene in Tehama county, showing a stream-flow which is employed in generation of electricity for transmission to the valley below for light and power. This single glimpse suggests the new-found relation of the torrents of the Sierra Nevada to the industrial activity and the life comforts of the State. All the way from this northern point in Tehama county southward for 500 miles or more, the falling waters of the mountains are being used for electric service, and the subtle fluid is conducted scores of miles to do work in valley and coast regions. This is a new phase of our development, and it is but just beginning to be appreciated and utilized. Then, too, the water itself is a great agency in the development of the State, which has never yet been conserved and employed except in a small, fractional part of its possibility. These are wholly apart from the vast agri-



A Scene in the Sierra Nevada—A Source of Light and Power.

cultural and mining values of the mountain regions. They constitute very suggestive considerations, as pertaining to the relation of the high mountains to the future growth of the State.

Another hardly less significant view is that of the Golden Gate, the chief avenue of the commerce of the United States to the broad waters of the Pacific. The Golden Gate is chiefly renowned for its natural beauty and for its poetic suggestions; but, without renouncing an atom of these desirable characteristics there lies beyond the new meaning as it is now dawning upon the popular understanding, and that is that this beautiful break in the Coast Range is not

merely a gate to the Pacific, but to the Orient. Possibly in earlier times the term Golden Gate signified the entrance to the gold fields of California. Since then it has been to most observers the opening through which gleam the golden glories of the incomparable sunsets of our coast. Now it certainly has added significance and is a symbol, and a thoroughfare as well, of the golden opportunities in the East which will bring progress and growth to our Western coast, in the rewards for commerce which will arise with our new possessions in the Pacific and with the rising and unfolding Orient.

Thus in these two scenes which are characteristic of our two great natural endowments—the mountains on the east and the ocean on the west—we see tokens of the newer life of California. Both the mountain and sea will prove treasures and advantages which our short-sighted vision has never fully decried. They are but now appearing and can not yet be measured. That will be the work, perhaps, of a coming generation; but surely we of the passing multitude may earnestly rejoice that we have lived to behold vistas of the promised land which we may not enter. Let us see to it that we in our time lay well the foundations for the future builders; let us fit our children to go forward, and fill them with both the spirit and the training which will actuate and enable them to meet and occupy the opportunities of the coming century.

It is reported from San Diego that a well known planter of Lower California has obtained a concession from the Mexican government for a company that proposes to establish a factory at Mulege, Lower California, for making fiber from the agave or century plant, known as maguey. A large amount of machinery is to be shipped through during the present month for the establishment at Mulege, which is 350 miles down the coast. The plan is to convert the fiber into binding twine. It is said that the McCormicks of Chicago are behind the project.



The Golden Gate—Sunrise in the West for California.



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E. J. WICKSON..... Horticultural Editor.

San Francisco, September 22, 1900.

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## The Week.

Following close upon California's glorification comes the woe of Texas. Appalling beyond expression is the thought of a vigorous city nearly obliterated by a storm and above 5000 people swept to death. The destruction of Galveston is perhaps the greatest calamity in loss of life that has ever befallen this country, and it is but natural that it should arouse such wide sympathy and summon such open handed generosity to allay the pangs of those who still live to be succored. From all parts of the State quick transmission of aid is proceeding, and all other States are doing as well. It is an occasion for the fresh outpouring of treasure in the interest of humanity. Reports are that the greatest bravery exists among the thousands who have lost all but life and that their spirit rises with their need and in response to the encouragement of their fellow citizens. A new city will arise and new scenes of activity in industry and in pleasure will appear upon the gulf shore, but there is not a child in the country who will fail to remember to the end of his life the woe and anguish of Galveston at the close of the century.

Wheat is doing better in the East and in Europe, but here the Big Four has been sitting on the market and keeping values down to old figures. No important changes in other cereals. Hay is not quotably higher, but the tendency is upward. Another advance is noted in prices of bran and middlings. Beef is commanding more money in the country than in this center, owing to sharp competition among buyers and firm views of producers. Hogs are bringing steady prices, and it looks as though values had touched bed-rock. Butter is higher; cheese and eggs about same as last week. In the dried fruit department there is little doing in other than prunes, which are moving in all directions, and, to aid the movement, the weather has decidedly changed for the better, enabling not only the more rapid curing of prunes, but also of raisins and other fruits.

THE State Fair closed on Saturday night after a very successful run in view of the many distractions this year. It is announced that in 1899 the gate receipts, which were heavier than they had been for years, amounted to \$20,834. This year, regardless of the fact that the Native Sons' celebration in San Francisco drew people away from Sacramento, as well as other sections of the State, the gate receipts amounted to \$18,520. The awards in the agricultural classes will be published in our columns as soon as a correct transcript from the records can be secured. All should bear in mind the great fair which will soon open at Tanforan Park, near the southern borders of San Francisco. It promises to be a great affair in stock lines especially.

## In Southern California.

We are in the beautiful southland of California this week, using both eyes and ears to keep ourselves informed of the spirit and progress of our parishioners in the seven counties south of Tehachipi. We find it a most important educational advantage thus to make personal observation. It is about the only way to becoming an all-around Californian and to understand the breadth and symmetry of the State's advancement. Sectionalism exists in all parts of the State. It is incident upon lack of knowledge. The remedies are appreciative reading of the wide range of local observations which is found in the columns of the PACIFIC RURAL PRESS, supplanted, whenever possible, by travel and personal observation. The fruit of efforts in these directions is a better understanding of the relations of the different parts of the State to each other and the importance of all parts to even and vigorous State advancement.

Perhaps the most pleasing general conclusion from wide observation is that the southern counties are not crushed—in fact are not even cast down, by the three dry years which they have met and vanquished. We never discerned a better mental attitude, involving courage, resolution and confidence. It has been demonstrated that much can be lost and yet sufficient gain can be secured. Water was developed and husbanded in such a way that the leading citrus regions are actually happy and prosperous beyond the condition of recent years. Prices for oranges and lemons have been good, as all our readers already know. The citrus fruits have brought seven or eight million dollars during the shipping year which closes this month. The profit has been satisfactory as can be seen by the single fact that one and a half million boxes of Washington Navel oranges averaged \$2.50 per box. Other sales have been proportionately good in the citrus line and the product was large. But the citrus product was only one item of southern income. The tourist crop was also good and sold well. The oil crop was buoyant and productive, and the Belgian hare crop, though it now seems a little frosted, yielded enough in the first few cuttings to bring a large amount of money into southern California, and there is enough left to make very cheap and wholesome food for those who do not weary of it. Other things also have done their share to compensate the south for her loss of grain and lack of hay and for the almost absolute rest which the dry lands have been forced to take. There never has been ill enough to induce general distress or even discouragement, though, of course, many individuals have suffered more or less according to their conditions and circumstances.

It is a common comment, at least in those parts of the south where enough comforting conditions, in the shape of new ways of doing well, have prevailed that the south will be on the whole much better for the years of drouth. The sentiment is gaining ground that rain should be ruled out as a ruling factor in any agricultural anticipation and that water development and irrigation should be the basis on which to place money and labor. It is a pleasing fact that though this is the third year that resolute and impassioned work has been done to secure water, the finding and capturing of unused water are still proceeding marvelously. Take, for instance, a single section adjacent to Anaheim, in Orange county, which we had the pleasure of visiting. According to a local authority more inches are being developed this year than last, and last year's development broke all previous records. Five pumping plants are nearing completion. Of these the smallest is equipped with a 7 H. P. engine, and is expected to produce 35 inches of water. Three of the five have 15 H. P. engines, and expect to secure from 75 to 100 inches of water. One has a 20 H. P. engine, and wants 125 inches. Beside these, a half dozen other pumping plants have been put in operation this year. They produce from 20 to 60 inches of water each. Portable pumping plants have also been busy. These attach to the wells of ranchers without plants and pump enough water to tide over the worst part of the season. Eighteen hundred inches is a very conservative estimate of the amount of new water developed in northern Orange county, exclusive of the oil fields, this year. This related only to a single region, all of it within sight from a housetop, but simi-

lar work is done and similar success is being achieved nearly everywhere. Even sixty miles away, afar in the interior and at a considerable elevation, as in the Perris region, the development of subterranean water by pumping is causing people to smile at empty, sun-baked reservoirs, because they can do without them. A few years ago an empty reservoir would have been deplored as a calamity, as indeed it is if one has to depend upon it.

There is a very interesting contrast to all this, and a contrast of some sadness also, and that is the distress and discouragement in parts of the old artesian region of Los Angeles and Orange counties. Between the higher slopes which are largely used for fruit and the lower coast plains, where the great gushers flow, there are intermediate belts where there has always been until this drouth a small flow from small artesian wells, which was chiefly used for domestic and stock purposes; and, as the water was near the surface, the crops and trees were trusted to do their own pumping if they needed more moisture than rainfall afforded. During this drouth these scant wells have ceased to flow and the earth-water has sunk too low for the shallow root systems of the trees and out of reach also of the roots of field crops. In these places there has been wide destruction of deciduous fruit trees, loss of field and forage crops and flight of people who could escape. In this region alfalfa fields have died out, not because the water was out of reach of alfalfa plants trained to seek their own supplies, but because the usually high earth-water discouraged deep rooting and the sinking of this water left the plants high and dry and dead. There are thousands of acres of the richest possible land now bare and desolate, though the water stands 7 to 10 feet below the surface. It seems almost incredible in view of what we know of cheap pumping, and yet there it is. The people are much reduced by three years of waiting for rain. Deferred hope of seeing water flow again from their little artesian well tops has not only made them heart-sick, but purse-sick also. It is a perfectly free local comment, and it seems to us justified by the facts, that such flowing wells as these people had have proved a curse to them. If the water had never flowed, they would long ago have had recourse to pumping. If it had never flowed, there would not have been the increase of alkali due to scant surface flooding from such wells, with not volume enough to carry the alkali away below. And so they stand distressed and suffering over a great subterranean reservoir, the water of which could almost be reached with a long-handled spade. Of course, this artesian belt is not all in such circumstance. In its lower levels there are well-watered dairy and vegetable lands which are doing well. Even in the parts which are doing worst, there are plenty of individual instances of those who have proved the practicability of pumping, and there are joint or co-operative pumping plants which are yielding large value, as in the Clearwater neighborhood and elsewhere. Still there are hundreds of artesian sufferers waiting, like Micawber, for something to fall down or flow up while they stand helpless among their dead orchards and bare fields. Will heaven help those who do not help themselves?

There will evidently be a considerable reduction of deciduous fruit acreage in southern California as the result of the drouth. Not only are there dead trees on the flat lands, where water has sunk below their shallow rooting and left them stranded in dry soil, too coarse to lift water for capilarity, though there is plenty within reach of trees taught to descend for it. Trees are dead also on the uplands, on slopes above the ditches, where they have been planted on the conception that rainfall is enough for deciduous fruits. While this is true, there are also many instances of the efficacy of adequate cultivation where some water has moved along by seepage from adjacent mountain sides and thus furnished moisture to be conserved by cultivation. The inefficiency of cultivation where there is no moisture to conserve has taught many what they should have known before, that cultivation does not create moisture, and that cultivation does not draw up moisture; it merely prevents the escape of it to a considerable extent. The new deciduous fruit plantings in southern California, as, in fact, all over the State, for that matter, will pro-



ceed upon a more rational conception of the needs of the deciduous tree when in bearing, and that to be regular in growth and bearing it needs adequate moisture just as surely as a citrus tree does, but not in such great amount nor during so many months. Much of the deciduous acreage which has gone out by this drouth would never have been satisfactorily profitable, and there was really no economic reason why it should linger longer in sight.

Our comments seem to flow naturally along lines of drouth lessons, and the visitor is perhaps pardonable for following the resident in choice of topics. Everything goes by water power. If there is anything on top of water it is oil, and that, too, is the natural place for it. The southern California farmer who has prospered in any way is doing something in oil. Horticultural meetings, which formerly had side-talks on olive oil and wine, now talk irrigation and fertilizers as main topics and petroleum straight as a diversion. Every neighborhood points with pride to its oil fields, if it has any, and the individual, if forced to admit his decline in agriculture, alludes exultingly to his anticline for oil. The scrip issued to the dispossessed owners in the forest reservations has been spread over oil territory, and the change is not shocking—it is something to burn in both cases. But this is only a diversion, after all. The kingship of water is undisputed, and the kingship of California with the rest of the vast arid region is more clearly recognized. We had the pleasure of listening to the addresses of Mr. W. E. Smythe, propagandist orator of the Water and Forest Association, at several points in the south. He is talking very ably and effectively in support of the grand work of this Association, making very clear the breadth and depth of the issue which underlies the development of the better half of the United States and the relation of California to this great proposition. Mr. Smythe is being very enthusiastically heard at the south, and he will create a furore in the San Joaquin and Sacramento valleys during the next two months. Our readers should go out of their way to hear him.

We can, of course, record in this connection but a few of the general impressions of our observations at the south. Acquaintance with facts, tendencies and motives is of permanent value and can not be described at one sitting. And yet we should fail sadly did we not bear witness anew to the southern acumen, enterprise and devotion to the highest interests of the State. In spite of the distractions of the drouth and the effort required to conquer it and even turn its ills to permanent advantage in works for future safety and independence, progress in pursuit of the higher arts of civilization is notable. Educational interests are going forward. Fine high school buildings, which put to shame some of the older regions of the State, are being constructed; and the fact that there are now in the State University more than twice as many pupils from south of Tehachipi that there were five years ago, shows that the highest interests of the State are being rapidly promoted. In other lines of public interest—in public buildings, in transportation, in transmission of power, in the promotion of all good things—the south is awake and active. Industrially, perhaps, some token can be seen in the fact, as just announced, that southern California has won seventeen medals at the Paris Exposition, with other exhibits still to hear from.

It is interesting that Germany is shipping horses from this port to China and at the same time is borrowing \$25,000,000 from American bankers. Germany ought to be glad that she has done so much by the gift of her sons and daughters to the upbuilding of this country. It seems to be a pretty good resort in times of need.

THE Dairy Convention last week during the State Fair was a notable meeting in the breadth and pertinence of the papers presented and the discussions had. We shall, as is our custom, publish the matters of widest interest as space allows.

THE interesting announcement is made that Californians at the Paris Exposition have captured fifteen of the highest awards for harvesting machinery, farm products and forestry, in addition to the awards for citrus fruits.

QUERIES AND REPLIES.

Winter Growth of Forage Plants and Vegetables.

TO THE EDITOR:—Will crimson clover do well on bottom land to sow this fall, and how late can it be sown, also alsike or Swedish clover? Would Dwarf Essex rape do as well to be turned under in the spring? Will onions do in this county to sow seed in spring? I am a newcomer and do not know much about farming here.—E. R., Ball's Ferry.

Crimson clover will not stand the lowland frosts. It must be sown in the spring and will bring a heavy crop in June. Alsike clover is more hardy and would be more likely to make good winter growth, but it would not endure the summer drouth except in very wet places. Rape would make a good winter growth, but it is of less value to plow under because it is not a legume and has no power to use atmospheric nitrogen, as the legumes have, as was discussed at length in last week's PACIFIC RURAL PRESS. Onions can be sown all through the rainy season in California from October to April, and on irrigated ground seedling can begin in August. Fall and winter growths of hardy vegetables are discussed in detail in "California Vegetables."

The President Strawberry.

TO THE EDITOR:—The new varieties of strawberries sent out from the University last year were all failures in my soil, and with my method of culture, except the President. This one was a grand success. It has borne three crops of berries and has now another crop on the plants. Where can I get more plants?—M. NORTH, Pasadena.

It is very proper that the President should succeed this year. The only question is, "Who?" and that will be answered early in November. This strawberry, however, has for its full name "President Carnot," and it is one of a collection of varieties of French and English origin sent out for trial from the University of California last year. We are not aware that anyone has plants for sale yet. In University distributions it is expected that each recipient will multiply for himself whatever seems worth it, or to call the attention of the local nurserymen to it.

For Better Wheats.

TO THE EDITOR:—I am much interested in your account in last week's RURAL of the desirability of trying for better varieties of wheat than we are now growing. All growers cannot import them in large quantities like the Stockton parties you speak of. Is there any way small growers can get small quantities for trial?—GROWER, Yolo county.

The U. S. Department of Agriculture at Washington is seeking such things continually through its Division of Seed and Plant Introduction, as was stated last week, and the State University at Berkeley is co-operating in the distribution of them. We have just heard from Washington that a small quantity of each of a number of introduced wheats will be furnished to the University for its distribution this year and all interested should watch for the announcement which will be made in a few weeks.

Depth of Cultivation.

TO THE EDITOR:—How deep must an orchard be cultivated to prevent capillary action so that there will be but little waste of irrigation water by evaporation when the soil is not wet to a great depth?—IRRIGATOR.

It must be deep enough to prevent the free access of air to the firm layer below the loose layer. It depends upon the soil how deep that is. From four to six inches is best and six is generally better than four. Do not depend upon a little dust layer; it is often a delusion.

Bringing up Moisture.

TO THE EDITOR:—What depth is it best to cultivate an orchard and have the best capillary action and bring up the moisture from the greatest depth with the least loss by evaporation?—IRRIGATOR.

Cultivation does not promote capillary action; it destroys it; and it is done largely for that purpose in this dry country. Cultivation does not bring up moisture. It arrests capillary action and evaporation from the surface and therefore holds from escape the moisture which rises from below by capillary action. Cultivation does not add moisture to the soil: it merely prevents the air from carrying it away.

Thomas Phosphate Slag.

TO THE EDITOR:—I would like to know if Thomas phosphate powder, applied to orchard this fall and cultivated in, would wash out during winter rains?—O. H. GALLUP, Palermo.

Thomas slag is not readily soluble, like superphosphate, or like nitrate of soda, and can therefore be safely applied earlier in the season. It can be used in the late fall or winter plowing, while more soluble materials should be applied in the spring in regions of heavy winter rains.

Malva as a Green Manure.

TO THE EDITOR:—What benefit is there in malva as a crop to plow under in an orchard?—L. X.

Malva contributes organic matter to the soil and thus increases its humus and benefits. It is not a legume and therefore cannot fix atmospheric nitrogen. Read the exposition of the subject in last week's issue.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending September 17, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

COAST AND BAY SECTIONS.

Cloudy weather and light rains have retarded fruit drying, but otherwise conditions have been favorable. Large quantities of prunes are still on the trays, and the larger part of the crop has been gathered; the fruit is said to be of better quality than previously reported, though mostly small in size. Apples will yield a heavy crop in some sections. Grape picking continues; the yield is generally satisfactory. The sugar beet crop is light. Bean harvest is in progress. Hop picking continues, with no improvement in yield. Corn will yield better than expected.

SAN JOAQUIN VALLEY.

The weather was partly cloudy, with cool nights, during the fore part of the week and clear and pleasant in the latter part. Light sprinkles of rain occurred in some sections on the 11th and 12th, but did no damage. The cool and cloudy weather somewhat retarded the drying of fruit, also the ripening of grapes and their developing the desired amount of sugar. Raisin and prune drying and wine making are progressing rapidly. Canneries and driers are shipping some fruit to local markets. The peach crop is about harvested, except the latest varieties. Hay is about all baled and being shipped freely to southern California. Egyptian corn is doing well, with prospects for a fair crop. Farmers are busy preparing for the coming season.

SACRAMENTO VALLEY.

Cloudy, damp weather, with occasional light showers, prevailed during the week. Very little damage was done to fruit on the trays by the rain, as warnings had been given, but drying was considerably retarded. Conditions have been favorable for grape picking, and much progress has been made. The yield of grapes is reported excellent. Oranges and lemons continue in good condition, with prospects of a heavy crop. Plowing and seeding are in progress in many places.

SOUTHERN CALIFORNIA.

The weather has continued favorable for the ripening of grapes and other fruits. Raisin picking is nearly completed in the vicinity of San Diego, except in the mountain vineyards; the grapes are unusually large and the yield very good. Citrus fruits are doing well, and prospects continue good for a heavy crop, but rain would be very beneficial. Prunes are being gathered and dried; the yield is very light. Wine making continues. Walnuts are ripening; those not affected by disease are full and heavy, but there will be a large percentage of small nuts.

EUREKA SUMMARY.—Showers during the past week greatly benefited pastures and late crops. Prospects for potatoes, corn and clover are more promising.

LOS ANGELES SUMMARY.—Bean cutting and threshing continue; the yield is light in places, fair in others. Raisin picking will end the coming week in some vineyards. The weather has been favorable for curing. Grapes are unusually large; many will run three crowns.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Sept. 19, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.	Total Seasonal Rainfall to Date.	Total Seasonal Rainfall Last Year to Same Date.	Average Seasonal Rainfall to Date.	Minimum Temperature for the Week.	Maximum Temperature for the Week.
Eureka.....	.16	.27	1.18	.76	50	86
Red Bluff.....	.04	.23	.02	.52	52	86
San Francisco.....	.06	.06	.02	.21	50	86
San Diego.....	.04	.46	T	.25	56	78
Fresno.....	.00	.14	.00	.23	50	82
Independence.....	.00	.76	.07	.46	48	82
San Luis Obispo.....	.00	T	.00	.32	48	80
Los Angeles.....	.00	T	.01	.13	50	86
San Diego.....	.00	T	.07	.09	56	74
Yuma.....	.00	*.00	.08	.62	58	100

\*Incomplete.



## HORTICULTURE.

### The Pruning of the Lemon Tree.

By C. W. LEFFINGWELL JR. at the University Farmers' Institute at Fullerton.

I wish, at the outset, to emphasize the fact that I consider pruning to be one of the most important questions which confront the lemon grower. It is a deep problem, and I pity the man who "knows it all." I approach the subject with humility, and can say nothing with positiveness—only setting down a few points which seem to me to be confirmed by observation, and by continued work on the same trees through several seasons. My object is not so much to make converts to any special mode of pruning as to make a few suggestions which may be of practical help to those who want to improve the condition of their trees, but do not know how to go at it.

**STUDY THE TREE.**—I think we should take for our text book in pruning the lemon tree itself. By studying its physiology we ought to be able to find from it an answer to the questions, "Why do we prune?" "How should we prune?" "When should we prune?" etc. The main reason why we must prune at all is that the lemon tree in its highly developed state has, in all its varieties, a strong tendency to grow too rank and bear its fruit at the extremities of its limbs. As a result the fruit is bruised by the wind, and the limbs break under their load. Now, as a rule, we find that Nature takes good care that every tree shall reproduce its kind in spite of the vicissitudes to which it is subjected in its native habitat. In its home in northwestern India the lemon stock grows in dwarf, shrubby form. The soil to which it is indigenous is, I suppose, none too good and none too moist, and, as the native tree is found as far up as the 4000-foot level on the mountain sides, I suppose it must be hardy and well calculated to take care of itself under adverse conditions. We take this stock, bud it onto a vigorous orange root, plant it in rich soil and force it with water. It is no wonder that it makes a growth which is artificial, and that the abnormal crops which we are seeking weigh down the limbs to the breaking point. Having started this artificial forcing process, we must stay by it to the bitter end, and, by pruning, seek to overcome the troubles that we have caused by changing the habit of the tree.

**CHIEF FAULT OF THE TREE.**—I can see no fault in the growth habit of the lemon tree except this one of growing too rank. Call up in your mind's eye the picture of a tree that has never been cut back. There are not too many limbs on this tree. The trouble is that the branchings of the limbs are too far apart. If we could telescope the long, unproductive canes between the branching points, and make the tree compact, it would be well calculated to set and to hold up large crops. The only way I know of to accomplish this result is to shorten back the new limb growth. Whenever a limb is cut back we know that it must branch out at the cut, and thus we can regulate the distance between branchings. So far so good; but when we cut back a strong-growing limb the result is sure to be several vigorous shoots or leaders, which want to grow straight up towards the sky. Successive cuttings back tend to make the tree look like a bamboo thicket—all upright suckers and not much fruit.

**CORRECTIVE TREATMENT.**—Granted that we must cut our trees back, what are we going to do with these troublesome leaders. In seeking an answer to this question let us first ask, "What causes the tree to grow in this way when cut back?" We must go to Nature for our answer. Left to itself, the tree will grow out and up, but by far the strongest tendency is to grow up. The sap will always seek vertical lines when it can. As the limb grows out it is bent down by the weight of its foliage and fruit. If there were no tendency to grow up, the result would be a bush or a trailing tree.

Nature comes to the rescue here and leads the new limb growth ever up. The fruit keeps pulling the limbs down—Nature keeps extending them up. As a result of these two forces the limbs assume the spreading, drooping form characteristic of the lemon tree. When a vigorous limb is cut back several of the terminal buds are excited into vigorous growth. The sap flows most freely into the shoots that point up, with a result that they grow like suckers, and often attain the height of from 4 to 6 feet before they branch. In this way with each successive pruning the strongest shoots grow up, destroying the balance and giving to the upward tendency the upper hand.

**TREATMENT OF LEADERS.**—From this idea we can gain a hint as to how to overcome this upward tendency. My theory is that by eliminating the leaders which go up, and by favoring those which lead out, we will restore the tree to its natural habit of growing up and out. As a result, the limbs as they grow will be pulled down by gravitation and become fruitful, and each successive deck of limbs which spring from the center of the tree can be made to grow up and then gradually out, so that they, in turn, will bend down to make room above for further decks. The limb which is grown in this way, and which has

been cut back so that its branchings are close together, will be stocky and will support a tremendous load of fruit. Perhaps we may make an exception to this rule in the case of the lower limbs of the tree, which naturally tend to bend down to the ground and which need to be encouraged in the upward direction rather than in the outward.

With this exception we may lay down, I think, as the broadest precept in lemon pruning this principle of training the limbs out. Perhaps next most important in a general way is the question whether to train the lower limbs high or to let them lie upon the ground. Where the soil is sandy and does not bake, where the trees are set far apart and the irrigating water is applied in furrows, I believe the best results will be gained by letting the lower limbs come down near the ground. In heavy soils that bake it is necessary to cultivate up to the tree, so that the lower limbs should be kept up off the ground.

**LEAD WOOD AND FRUIT WOOD.**—Having decided the general form in which the tree should be trained, let us consider the methods which we must pursue to accomplish the desired results. There are two kinds of wood on the lemon tree. We may designate them as limb wood and fruit wood. Limb wood forms the skeleton of the tree. Fruit wood clothes the skeleton, as it were, with flesh. Of the shoots that come with each new growth, some get the lion's share of the sap and grow vigorously. These are the leaders or bones of the tree, the extension of the skeleton. Others of the new shoots stop growing before they are very long. They become dark in color, are slender and harden up. These are the fruit spurs. It is very necessary in pruning to distinguish between the leaders, or new bones, and the fruit spurs. This is so simple that a child could learn it, but I venture to say that not one in three men who call themselves professional pruners know the difference. The training of the tree should be confined almost entirely to the skeleton limbs. It is necessary to look right through the flesh, or fruit wood, and to see clearly the naked skeleton. Every new leader becomes a bone added to the skeleton, and is, in turn, a foundation for all new growth upon that limb; so that by training the leader in the proper direction we can give to the tree the shape which we desire. The fruit wood will take care of itself, and will clothe the skeleton.

This principle, properly applied, will help greatly in thinning trees which are too thick. Do not thin them by snipping off the fine brush and leaving the main limbs bare and naked, but cut out whole branches where they are too close, even if you should make big holes in so doing. You will be surprised to find in a few months' time these gaps closed up. You will have as much bearing space as before, with the limbs stronger and better spaced.

**UPWARD AND OUTWARD.**—Again, in treating the lower limbs to keep them off the ground, we must confine our cutting to the strong shoots or leaders. If these were trained always out, they would soon bend down and rest upon the ground. Hence it is that we must train them up as well as out. When pruning, cut the leaders back to a bud that points up, being careful not to cut closer than  $\frac{1}{2}$  inch from the chosen bud. At the next pruning you will find here an upright shoot. Cut this back to a bud that leads out. Encourage this outward-growing shoot by keeping other shoots from leading upwards. By successive prunings the limb can be made to lead upwards like a pair of stairs. As gravitation pulls it out and down, we are growing it up all the time and making it stocky, so that it need never droop below the horizontal. From these lower skeleton limbs will grow a mass of drooping fruit spurs. It is the greatest mistake to cut these off. They grow close in, are anchored to stocky limbs, and are the most valuable fruit wood on the tree. Here we find the most of the finest lemons, where the leverage of their weight cannot break the tree and where they cannot be swayed and bruised by winds. If it is desired to run the harrow under the tree, these fruit branches can be cut back enough in the fall to clear the ground. They will get down to the ground again by summer time, when it is not necessary to stir the ground close to the tree. The average professional pruner would probably cut this valuable brush all off, and skin the limbs entirely of their fruit wood, leaving little bunches at the tips, with the fork of the tree all bare and unproductive. Five thousand dollars would not offset the damage done to our orchard in this way in one short month. Our whole aim in view is to condense the tree and make it bear fruit near the center. Nothing could defeat our purpose more surely than to cut off the beautiful fruit wood that naturally grows about the lower branches and brings fruit just where it is wanted.

**WHEN AND HOW.**—The question is often asked, "When and how often shall we prune?" The new growth should be let alone until it has stopped growing and hardened up. Such leaders as are vigorous and perhaps  $\frac{3}{4}$  to  $\frac{1}{2}$  inch in diameter, if they are properly situated to build on, should then be cut back. If they are not properly situated, as before suggested, they should be cut out. If they are merely cut back and not eliminated, the result will be two or three new leaders in a place where they are not wanted. When a leader that we wish to keep is not yet grown large and hardened up it should be left till the next

pruning. Where the soil is good and the trees are young there will be at least three growths each year which will require pruning.

As to how far at each pruning to cut back these leaders, I have tried various lengths and have adopted the general rule to leave from 8 to 12 inches, according to circumstances. Sometimes when the leader we desire to build on is not vigorous it will pay to cut it back to a few buds only, thus encouraging a stronger growth at this point. Very often a limb gets split up into so many branches that no one of them shows any tendency to shine forth and extend the skeleton of the tree. If a strong growth is necessary here to keep the tree in balance, select one of the most promising branches and cut it back to the first bud that leads in the desired direction. There is a chance that this will incite a sucker-like growth, which can be trained as an extension of the branch.

There are many details that might be dwelt upon, but perhaps the above suggestions will be enough to give a general idea of a rational system of pruning. Enough has been said, no doubt, to show that much careful thought and study is necessary to do good work, and that pruning should be gone at systematically, with never a cut for which a good reason cannot be given. Under such a system no doubt some mistakes will be made, but the results are sure to be better than can be attained by slashing recklessly into the tree without knowledge of its growth and character.

**OPEN CENTERS.**—Perhaps I am expected to say something about the open center system of pruning. I believe that an old lemon tree should be open in the center, so that air and sunlight can reach every part. This is a result to be worked up to slowly, and the man who recklessly cuts the whole top out of a young lemon tree certainly makes a mistake. The severe cutting destroys the natural balance between top and roots, resulting in a rank sucker growth, very hard to train into good lines. The cone-shaped opening cut into the top of a young tree is bound to grow flat, and the tree will no longer have the hollow top desired. We cannot build a tree in a day, and if we desire our tree when grown and matured to have an open center we should work gradually to this end. Train the limbs up and out. When they bend down, grow new limbs up from near the center of the tree, to be, in turn, trained out. In this way we can grow deck above deck, and always have the center of the tree open.

**PRUNING ESSENTIAL.**—All this may seem to cause more trouble than it is worth. I look upon the expense of pruning as part of the permanent investment. It is as essential to success to have good trees as good land. If we can, in their first seven years, build the trees for their work, they will become good machines to convert fertilizer and water into fauzy fruit. The pruning thereafter will be almost nothing, and our troubles on that score will be over.

### Fertilizers for Orange Trees.

Extract from a paper by A. S. BRADFORD, at the University Farmers' Institute at Fullerton.

I think we are all in accord that the orchards which are continually cultivated and kept free from weeds need humus in the soil to make it light, and the best way to get it there is to use stable manure which, I think, is best for this purpose, and in addition to the addition of humus it acts as a mulch and the soil retains the moisture very much longer and will be kept light and life-like, while in the majority of our orchards the soil seems deep.

Sheep manure is good, but for a mulch it is not good, as it heats, burns and dries the soil and much of it seems to be about one-quarter weed seed. Sheep manure will make the young trees grow well, but what we all want is a fertilizer for the bearing orchard, as the young trees generally will do fairly well on most soils.

No one can deny that continually cropping the soil with heavy crops of oranges very soon exhausts it. Of course the richer the soil the longer it will hold out, but the only way to do is to replace what is taken from the soil by the crop as nearly as possible. I believe commercial fertilizers of any first-class brands are the very best, as results have shown.

I have a section of my young Navel orange orchard, five years old the 16th of June last, fertilized each year with commercial fertilizers, which shows wonderful results. Last March the trees, being four years and eight months old, produced on an average five and two-thirds picking boxes, or about four packed boxes per tree. These trees are as large as seven and eight-year-old trees generally are, and now they are so loaded with fruit that they will require propping at once. Then, again, my older orchard of Navels, now nine years old, produced from fourteen to fifteen picking boxes to the tree. I know of orchards with very much larger and older trees which do not on the average produce that amount, and I think it is caused by a lack of fertilization, as I know that but little has ever been used.

Commercial fertilizers tend to make the orange smoother, thinner skinned and more highly colored, which are all very desirable points to have. I think



that each year a liberal fertilization should be used to keep up the fertility of the soil and not wait until the trees show the want of it, for then the last few crops will have been lighter each year and it would take two or three years to bring them back again to full bearing, making the loss very great, while if the orchard is fertilized regularly it will continue to produce abundant crops for an indefinite period.

On another section of my orchard where I have not used fertilizers for the purpose of experimenting, the result is that I have experienced a very great loss in size of trees and consequently less fruit. The trees have all had the same care.

In my judgment a perfect fertilizer for an orange orchard is a light coat of manure, and commercial fertilizer with it, applied in February and July or August. It is better to plow the manure under. This, however, cannot always be done. I do not think we can get the results in one year from any fertilizer. Sometimes it can be done, but it requires plenty of moisture, especially with commercial fertilizers, to dissolve them, otherwise they will lie in the soil unused, and this often prevents seeing any marked results from their use. The most important things in an orange orchard are: first, water; second, cultivation; third, fertilization. With the two former, fertilizers will act well and good results will be obtained.

Some orchardists will use a little fertilizer one year and because they do not get an enormous crop of fancy fruit claim that the fertilizer is no good. The only way to test the question fairly is to use the fertilizer year after year on a certain section of the orchard.

I have not said anything about fertilizing the walnut, for I have never, so far, seen anything that would increase the crop or wood growth on our rich soils. Water and cultivation seem to be the only things we need to give them. Perhaps on some light soils fertilizers may do good.

## THE FIELD.

### Cultivation.

By W. A. NEWBERRY, at the University Farmers' Institute at Garden Grove.

Cultivation in my own case is pursued after the spring plowing entirely for the purpose of retention of moisture. We never consider the subject of weeds. Naturally, it is unnecessary, for the man who works his ground fine enough and frequently enough to retain moisture will not be troubled by any growth of trash.

PREPARING FOR A CROP.—T. J. Lewis of Westminster, one of the most successful farmers in that region, told me the other day that he harrowed his ground immediately after every shower, however slight. He was speaking of ground that he was pulverizing for future planting and this pulverizing feature he strongly advocates. It seems to me that this is a good feature. The farmers back on Long Island, in New York, on almost the poorest soil that lies out of doors, get bigger returns in bushels of wheat than the farmer in California does with the rich soil that we have here. The reason lies largely in his manner of preparing the soil before sowing. He pulverizes it by frequent harrowing until it is mellow as an ash heap, puts in his wheat with a seed drill and gets a big crop. Another reason why he can take all that trouble is that he seldom plants over ten acres. He puts his wheat on his potato ground, which had 100 pounds of fertilizer to the acre.

NOT A SUBSTITUTE FOR IRRIGATION.—A gentleman of my acquaintance near Anaheim is such an advocate of intense cultivation—limiting the meaning of the word to work done with a cultivator—that he does not irrigate. The consequence is that his walnut orchard has gone back terribly. He insists that incessant pulverizing forms a mulch and will bring up the moisture from below by capillary attraction. His trees do not show it. I believe he is as wrong in his practice as the man is who irrigates and then lets the ground stand for a week or ten days before he works it up fine.

CULTIVATING ALFALFA.—I have been told by the German people of Anaheim that they cultivate their alfalfa fields in the fall. They raise good crops of alfalfa hay in Anaheim. I shall try the cultivation of alfalfa this fall. I shall cut it up with a weighted harrow, in the hope of securing improvement. I shall also put in more seed. This may not be exactly the Anaheim plan, but I believe it will help my field.

FOR ORCHARDS.—I believe that plenty of cultivation, taken both before and after a liberal irrigation, and accompanied by a good jolt with the pruning shears, is a good thing for an orchard. I do not like the plan of dragging a smoothing harrow attached to the cultivator, as it seems to make a crust. Indeed, after irrigation I prefer to cross cultivate with a good machine that works deeply, and then as soon as the top dries a little, so that it will powder up fine, harrow it down well. You can work your ambitious horses down to a steady basis in this work and then repeat. The result is a fine mulch, which is supposed to assist in keeping out drying air and assist in holding the moisture, and it will do it.

DISCUSSION.—The idea of cultivating alfalfa was

strongly approved by one speaker. He used a disk and cut the surface until the alfalfa was almost lost to sight. He had grown grain on this disked alfalfa field and found the alfalfa in good shape after harvest.

### Fertilization.

By E. G. WARE, at the University Farmers' Institute at Garden Grove, Orange county.

It is well known that the land can not be cropped for a number of years without exhausting the soil. When I came here, over twenty years ago, I was told that manure injured the crops in California. We used to work out our road tax by drawing out the manure to fill up the ruts in the road. A few years ago two Germans moved to this place and commenced to fertilize their land heavily. They told me that one of their neighbors had a corral in which the manure had become so deep that he was going to move the fence and make a new yard to get the stock out of the filth. They kindly offered to clean out the corral and put the manure on their land, for which he was very thankful. They produced excellent crops, which proved it was very beneficial.

MARKET VALUE OF MANURE.—Now the old idea of manuring is all changed. Good barnyard manure at the present time has a commercial value of 2 cents per cubic foot, delivered and spread on the ground. I have paid out considerable money for the past two years at the above price on land that I have charge of, and find it hard work to get enough of it. There is no more working out of road taxes in the old-fashioned way.

A few years ago, when over these plains were pastured large flocks of sheep, corrals filled deep with the rich droppings of these animals were scattered all over the country. Then came enterprising Riverside and relieved the country of these unsightly landmarks. It took sheep manure out of the country by the trainload, gave employment to the farmers in hauling it to the stations and restored the land to its normal condition.

About this time the land did not produce as good crops as formerly. The farmers came to the conclusion that they were mistaken about manure injuring crops. They would like to have some of that fertilizer which was taken to Riverside. This for some time has been worth 3 cents per cubic foot, delivered and spread upon the land.

APPLICATION OF MANURE.—After a while came the Farmers' Institute and the discussions on fertilizers, care and application of barnyard manure, etc. A few of these points I wish to touch upon. In California the cheapest and easiest way is to spread it out as it accumulates and let it dry. If thrown in a heap while moist it will fire and ferment. It should be kept dry until put upon the land. Good chemists tell me that as soon as it ferments it throws off the ammonia and the most valuable part of the manure. Fermentation should not set in until it is plowed in the soil; then all the plant food in the fertilizer will be utilized without any loss.

IMPORTANCE OF MOISTURE.—There must be plenty of moisture in the soil when the manure is applied, or when it ferments it will injure the roots of the plant or tree. This is why in former times they thought the manure was an injury to the crops, because it was put on, hit or miss, and the intelligent use of water was not called in in connection with it. Fresh manure can be put on an orchard at any time of the year without injury to the trees, provided the land is irrigated first and the manure is then plowed in. Mr. Thomson of Duarte told me he applies fresh horse manure to his oranges at any time of the year he can get it—one-half of a large load to each tree. He uses plenty of water with the manure, which prevents injury to the tree. As the result of this practice, his five-year-old trees yielded five boxes of oranges to the tree.

GREEN MANURING.—The conclusion I have drawn from discussions on green manuring is that the Canada field pea is the best plant for that purpose. These should be sown in the fall and plowed under before the rains are over. I have heard it stated at the Institutes that alfalfa hay is worth \$5 per ton if plowed under as a fertilizer. In this vicinity, if you have water, you will probably follow dairying, and barnyard manure will form the chief fertilizer. As for green manure, I believe alfalfa fields plowed under and then cropped would produce the best results. Alfalfa roots certainly make the best kind of fertilizer. About ten years ago near Garden Grove was an old alfalfa field, part of which was naturally poor land. This was plowed up and planted to corn, and for two years produced fine crops. This land received only the natural rainfall, which, however, was more than we have had for the last three years.

FOR FRUITS.—Water is here waiting to be developed. When that is done with cows, alfalfa, rotation of crops, corn for the silo, and the land brought to its highest productiveness with fertilizers produced on the farm, there is no reason why this part of the country should not be prosperous and thriving. For trees I have seen the best results with both commercial and barnyard manure the same year. In one piece of orange orchard, 8½ acres, which I have charge

of, I put on \$75 worth of sheep manure and \$225 worth of commercial fertilizer. I had an increase of 1200 boxes of oranges. The increase might not have been due entirely to the fertilizer, as the orchard work was also better done than during the previous year.

Some growers raise large crops without fertilizers, but they usually have strong, rich land, which will give out in time. A grower who has experimented a number of years with commercial fertilizer tells me that fifteen pounds are as much as he finds profitable to put on a matured tree in one year. As a rule, you can use as many pounds as the tree is years of age.

I do not think walnut growers are giving attention enough to fertilization. I have taken pains to get the tonnage of many of the best orchards in the county. I find the old orchards do not produce as many nuts as they should, in comparison with the young trees. I see no reason for it, except the lack of fertilization. Last year I gave more attention than formerly, and this year I see a marked improvement in the production of the older trees.

Each producer of any product must study for himself the best and cheapest fertilization for his soil and crop. This may cost some money to find out what is best, but in any business you must make an investment of labor or money to obtain a result.

### Lima Bean Growing in Ventura County.

By E. P. HALL of Saticoy, at the University Farmers' Institute at Montalvo.

I am unable to give the origin of the Lima bean, when first brought to this country, by whom brought, or from whence they came. We may infer from the name, however, that they are a South American product. One thing is quite certain; the Lima bean is here and here to stay, and that it is an important factor in the prosperity of this valley and must remain so for years to come.

The area of country in which the Lima bean can be grown with profit is small in these United States. This is evidenced by the fact that during the three dry years here, in which the crop has been light, though not an entire failure, Lima beans have advanced in price nearly four fold. This is owing to shortage in the amount produced and not to any increase in their consumption on account of the war.

In the successful cultivation of the Lima bean a number of things are necessary. Among them are location, soil, moisture, proper preparation of the soil, selecting of seed.

LOCATION.—As before remarked the area of country in which the Lima bean can be successfully produced is limited. The frequent rains in the States makes it necessary to either pole or trellis their beans, adding much to the cost of production, and upon this coast a few miles inland from the ocean, the heat is too great, so that even where moisture is abundant or the soil might be suitable, the Lima cannot be profitably grown.

Aside from a small portion of San Luis Obispo and Santa Barbara counties, Ventura county, and that right here in this valley, must produce the greater portion of the Lima beans to feed the nation.

SOILS.—The greater portion of the Santa Clara valley, except the foothills, extending from the ocean to 20 miles inland, is good for Lima beans, provided there is sufficient rainfall or where irrigating may be done. We have quite a diversity of soil in this valley, any of which will produce Lima beans, yet it is not all equally good for that purpose. I think the light soil found near the foothills which has been washed from the canyons, taken under all circumstances, is the best for Lima beans. Not that it invariably produces the largest crops, but with equal cultivation and equal rainfall I hold it to be superior. This is more noticeable in extremely dry or extremely wet seasons. On sandy soils, or where alkali is found, the beans are more liable to be affected by heat, even where there is an abundance of moisture, as the heat is more rapidly radiated from such soil and the beans are burned and the crop diminished. The heavy adobe soil, although producing good crops of beans under favorable conditions, cannot be called first-class Lima bean land, as it is more seriously affected by too much or too little rainfall; yet, as we said, large crops are often produced under favorable conditions on adobe soil.

MOISTURE.—The insufficient rainfall of the past three years, and, in fact, during the past seven years, has made the question of moisture of vast importance. I think the Lima bean may be grown on as little moisture as any crop here near the coast, and that as large a crop of Limas may be grown on as little rainfall as the earlier varieties of beans, such as the Lady Washington, Small White or the Black Eye. The experience of the past few years has taught us important lessons on the subject of moisture. It has been a surprise to many how little moisture by way of irrigation or natural rainfall is required to produce a crop of Lima beans with favorable weather during the summer months and upon ground which has been properly cultivated.

It is thought that from 6 to 8 inches of rain, falling between February and March, with a few light showers during April, enough to allow of the thorough



pulverization of the soil, will be sufficient to insure a good crop of beans, if the summer be at all favorable and the land has been properly cultivated.

**PLOWING.**—The great secret of success lies in the proper cultivation of the soil. It sometimes puzzles the best man in the mountains or the valley either to know just when and how to work his land to secure the best results.

On first coming to this valley I asked a farmer who had been here many years when and how to work my land. His reply was: "Go ahead; you know just as much about it as the rest of us." While I have learned some things in the past fifteen years about farming in this valley, I am still at a loss many times to know just how and when to cultivate my land, and I am persuaded my neighbors are in the same dilemma from the different opinions they advance and the different manners and times of doing their work. I will venture, however, as my opinion, that early plowing is best, and that deep plowing, when done early, is better than shallow plowing or mere chiseling, and I think our land needs a more thorough cultivation than it did ten years ago to produce good crops of Lima beans, or, in fact, any summer crop.

**MANURING.**—For Lima beans, I have failed to see any marked results on ground where I have applied manure. If manure is applied early in the fall and plenty of rain follows, it may be of advantage; but with little rain it will prove a detriment. No weeds should be allowed to grow, as they rob the beans and are a very unprofitable crop, especially when allowed to mature their seed.

**PLANTING.**—Having properly attended the land during the winter and spring, and with a surface thoroughly pulverized, we are ready for planting. Time of planting depends upon the weather, I think, as a rule, from May 1st to the 10th, if the weather is warm, is a good time. If the weather is cool and the ground cold, wait until it is warmer, as the seed is much less liable to rot in the bag than in cold, wet ground, and, if not planted till the weather is warm, you will get a more vigorous and healthy plant, and the beans will mature nearly as early in the fall.

**SEED.**—A very important factor in the raising of Lima beans is the selecting of seed. In this I fear we are too negligent. Much of the seed planted now in this valley is deteriorated from what it was a few years ago. You may take a handful of beans from almost any bag brought to the warehouse, and in it you will find from three to five kinds of Lima beans. You will find the thin bean, called by many the "rat-tler," you will find the large white Lima, the medium size flat Lima, and the large, full, plump, round Lima.

That these apparently different varieties do better so mixed, or that some one variety grown separately would be better, is something we ought to know. Now, if some brave, public-spirited man would test this question for us, he would be a benefactor and might add to his fortune as well by so doing.

**How MUCH SEED.**—Another thing to be considered is the amount of seed per acre. I think the plan of thick planting has been carried to an excess. We hear of some planting sixty pounds per acre, or even more. Now, too thick planting tends to dwarf any variety of grain, and beans as well, and more especially the Lima. As with all grains, thick seeding or planting tends to hasten the maturity of the crop and prevents the development of the best specimens. It might be well, for instance, if the planting is necessarily late, to plant more seed per acre than if the planting were done earlier, for the reason, as we said before, that thick seeding matures sooner than thin seeding. It is my opinion that from thirty to thirty-five pounds of seed per acre is sufficient, and will bring better results than more seed. In fact one of the best, if not the best, crops I ever raised, but twenty-seven pounds of seed were planted in rows 40 inches apart. This was of the large white Lima, and of pure, clean seed. I have tried thinning to from 14 to 16 inches apart in the row, with rows 40 inches apart, with good results, getting large, well-developed beans with few small, unmaturing, undeveloped ones.

**CULTIVATION.**—If there is a scarcity of moisture, or where a light shower has fallen after planting, harrowing may be done with good results. If there is plenty of moisture and weeds are likely to start, it is better not to harrow after planting, but leave the drill marks open to be filled in cultivating. It is conceded that flat cultivating is the best, in fact the only kind of cultivating that should be done after planting. All weeds should be taken out as soon as they appear.

**HARVESTING.**—In cutting the beans, better let the late pods get a little yellow than to cut too green, unless the whole crop is late for the season; then it may not be well to wait for the green pods to mature. Beans piled immediately after cutting become more compact and handle better in pitching, while they may not do to thresh as soon they are less liable to be blown about by the wind. Small holdings may be more cheaply threshed by tramping than by machine.

It is not advisable to be at great trouble or expense in trying to get beans clean by hand power. Better clean them as well as once putting through the mill will do, and then have them re-cleaned at

warehouse. Buyers can then make no complaint, and it is cheaper in the end.

**MARKETING.**—As to selling of crop, every man must under present conditions be governed by his own judgment and circumstances. The failure of the Lima Bean Association to accomplish what it was hoped it would, has discouraged the bean growers from attempting to make an effort to secure remunerative prices for their product; yet the time may soon come when even the bean growers may have something to say about the price of their product. Under the present conditions, however, I think as a rule it is best for the farmer to sell his products when he has them ready for market, and when buyers are in the field.

**CROPS.**—The largest crops of Lima beans of which I have heard being raised in this valley was one raised by James Clay on the ranch now owned by Mr. Kyler. This was 3000 pounds per acre, and another by James Cummins, near Santa Paula, of 3600 pounds per acre. The highest price at which Limas have been sold of which I have heard was for 6½ cents per pound by J. K. Myers. Putting this price and the Clay crop together we have \$187.50 per acre; putting the price with the price with the Cummins crop we have \$218.75 per acre. The cost of raising an acre of Lima beans I think is not as much as that of an acre of beets. Now we will allow that the value of the beet pulp and tops is equal to that of the bean straw for stock, so nothing need be said about that. It is an undisputed fact that when beets have been grown upon the same land for a number of years the land becomes worthless for beets, unless expensive fertilizers are used, while, on the other hand, it is asserted that Lima beans might be grown upon the same land for a generation without losing any perceptible part of its fertility.

**HONEY.**—Another thing in favor of the Lima bean is the fact that the best honey is made from its blossom. Many tons of fine honey were produced from the beans in this valley in 1897. It is true a good quality of sugar may be made from the beet if you have a million and a half or two millions of dollars to put into machinery, but with a hive costing but a few pence, a swarm of bees will produce a sweet that beats beet sugar all hollow, and all from the Lima beans, and you still have be beans left!

Again, in the growing of the Lima beans, the farmer is a free man. He may plant when he will, get his seed where he may, and harvest his crop when ready. On the other hand, the beet man must buy his seed of the company, pay the price asked, plant when told to do so, and harvest and deliver his crop when commanded, being deprived of using that economy the bean man is at liberty to use in handling his crop.

#### Options.

An option is a contract by which an owner agrees with another person that he shall have the right to buy his property at a certain price and within a certain period of time.

It is not a contract for sale and grants no interest in the property.

It is binding only on the owner of the property.

The holder of the option is under no obligations to purchase.

Before a sale or a contract of sale can result the holder must avail himself of the privilege of the option, notify the option giver and comply with its conditions.

It must be in writing.

The period of time it shall run does not need to be absolutely stated.

If a consideration is present it will run a reasonable length of time, depending upon the time required to carry out its conditions.

A consideration should be present.

If no consideration is present the option giver can withdraw it at any time.

If the option is under seal a consideration is presumed.

Every extension of an option must have a consideration.

"Until" a certain day means that day included.

No action of the giver of an option is necessary to "expire" it.

Time is the essence of an option, but not as to its performance. Reasonable time will always be given to carry out its provisions.

An option without a consideration is a mere offer, and may be recalled at any time, whether the time stated has expired or not.

Specific performance will be required if the giver of an option refuses to comply with its conditions.

An option is assignable.

Specific performance will not run against third parties who have become purchasers for value in ignorance of the option.—American Investments.

At 16 cents per pound there is found a profit in importing copper coins from India and melting them for commercial use, being worth more that way than as coins.

In making steam, weight for weight, it is the result of experiment that wood has two-fifths the evaporative power of coal.

#### A Grave Danger.

A recent decision of a State Supreme Court in an important case overrules the lower court and gives justice by a majority vote of four to three; that is, four of the supreme judges think one way and three think the other way, somewhat after the fashion of a public vote. The three dissenting judges set out at learned length their opinions, arguing diametrically opposite to the other four equally learned judges, and as it happens that four think one way—one more than thinks the other way—the scales of justice incline that way. Probably an easier and less expensive method of securing justice in a court of last resort would be to have a well balanced scales, and pile the briefs, appeals, rejoinders, surrejoinders, arguments and other legal accompaniments for plaintiff and defendant in either side thereof, and award the decision to the party having the weightiest pile.

A verdict of four to three, which would not be allowed in a jury box in a justice's court, is beneath the dignity of a high appellate court and seriously tends to undermine its influence. No State is alone in this degrading practice; nearly every State in the Union has similar experiences, and even the Supreme Court of the United States—the highest tribunal on earth and the most respected—in some instances is itself guilty of what might appear to be trifling with the grave requirements of the nation, as in the case of the decision on the income tax, where the court was divided, one justice changing his mind over night, reversing his opinion of the day before, and thus giving a bare majority to the decision.

We speak of the Supreme Court of the United States as being "the highest tribunal on earth." But there is a still higher one—public opinion—and before that great tribunal all things human are judged and by its standards all things human rise and fall; continue or are overthrown; subsist or are smashed. There never should be a dissenting opinion in the Supreme Court of the State or nation. The decision handed down should be the decision of the court, and not of any judge; any other course is indirectly a blow at its own dignity, at public respect and regard for it, and constitutes a menace to our institutions. People have none too high an opinion of courts now that the courts themselves can trifle with their great positions in reducing regard for what they say to a point even below its present condition. The dissenting opinion of a judge can have but one motive, and that is to give him his little chance of airing his individual views and opinions. No one cares what Brown, J., or Smith, J., thinks about the case in point; the question is, what is the decision of the court, so that men may know what that decision is and govern themselves accordingly. When the curtain is raised and the public is shown the little individual discord and unharmony, it does not tend to enhance public respect for the source of justice which is supposed to flow pure and undefiled.

As it is to the interest of the public that there should be an end to litigation, so also is it to the public interest that when a question is settled by the highest tribunal it should remain settled for all time. The result of the one or two or three dissenting opinions in a Supreme Court decision is simply to open up for future discussion, litigation and bickering, the very question that is supposed to be finally settled by the decision of the tribunal. It must be settled somewhere. In that Supreme Court is the place for settlement; that tribunal was selected as the final arbiter, and for one or two or three of those constituting such final arbiter to publish an opinion favoring the very cause that is decided against by the court of which they are constituted members, is, to say the least, poor policy. When the public reads those dissenting opinions the public naturally gets the idea that justice has not been done by the court; that there is no justice about it; that it simply happens to be four to three, and that if one of the four had happened to have a bad night, or a poor dinner, he might have joined the ranks of the dissenters and then the verdict would have been the other way. This is too slight and tender a pivot upon which to hang the scales of justice, and tends to weaken the court in public esteem, for the common, ordinary lay reader cannot help having the idea, however mistaken, that the court has lent itself to injustice and inflicted a wrong. Some of the dissenting opinions are models of what they should not be in an explanatory and argumentative way. All that is required is a concise, well-written summing-up of the points decided and the reasons therefor, the whole being the opinion of the court unanimously.

There are currents in the streams of time and of national life which, though sometimes broken and temporarily checked, yet turn and double in their course with increasing power and injurious effect. Such currents are flowing noiselessly yet powerfully throughout this nation to-day and threaten to smother in foul depths the fair growth of our institutions. These currents cannot be wholly checked nor smothered, but they need not be augmented. A growing disregard for and disbelief in judicial decisions is among the fountains that feed those currents, and the continuous practice and manifest folly of dissenting judicial opinions and constant weakening regard or belief in the justice of judicial decisions constitutes a grave danger.



## Agricultural Review.

### ALAMEDA.

**GRAPE PRICES HIGH.**—Niles Herald, Sept. 14: Wine grape growers in this vicinity are being offered \$17 per ton for black and \$20 for white grapes, but show little hurry to sell. The general average yield is six tons to the acre, or from \$102 to \$120 per acre, which gives a good margin of profit.

**BIG FRUIT SHIPMENTS.**—Niles Herald, Sept. 14: The E. A. Ellsworth drier has shipped five carloads of fruit the past week. One car of sixteen tons mixed dried fruit went to Minnesota, two carloads of green peaches aggregating thirty tons and one car of eighteen tons dried, pitted Silver prunes went to San Francisco. One car of pitted Washington prunes in twenty-five pound boxes, aggregating fourteen tons, went to Philadelphia. It is expected that a twelve-ton car of almonds will be sent to Chicago, making a total of ninety tons exported during the week.

**SAN LEANDRO TOMATO CROP.**—Cor. Oakland Enquirer, Sept. 14: The tomato crop in this vicinity is now being harvested. A heavy yield is expected if the rain holds off. The light sprinkles which have already fallen have done no damage; but, should there be a heavy rainfall, it would cause all the tomatoes that are nearly ripe to crack, ruining them for canning purposes. The King-Morse Cannery is very busy with tomatoes. Considerable more fruit will be put up later in the season.

### BUTTE.

**EARLY ORANGES.**—Biggs Notes, Sept. 11: While at Oroville Thursday our reporter was given an orange that was ripe enough for shipment. It was from the grove of Mrs. Virginia Cox. It is asserted that carload lots will be forwarded from the citrus belt at Palermo by Oct. 15th.

**FIGS PROFITABLE.**—Oroville Register, Sept. 6: J. A. Cleveland of Thermalito lets nothing go to waste on his land. He has some fine grapes that paid him fairly well, although sold at a small price. He has some White Adriatic fig trees for shade trees about his house, and this year as usual he picked and dried the fruit. He will have about 200 boxes and is shipping the same to Sacramento, where they net him a handsome figure.

**GOOD PRUNE CROP.**—Oroville Register: On the west side of the Feather river, in what is locally known as South Thermalito and Rio Bonito, the crop of prunes is very good this summer. Will & Gable have between twenty and thirty men picking prunes this week. M. Goldman, Marion Biggs, E. S. Menzies and others are busy at work on their prunes. Will & Gable will have about seventy-five tons of cured prunes, and the other crops along the river will make about 225 tons more, or 300 tons of dried prunes in all. The crop of prunes on the Rio Bonito orchard is the largest and heaviest ever grown there.

### CONTRA COSTA.

**BUYING HORSES.**—Antioch Ledger, Sept. 15: Dr. J. D. Forrester of San Francisco was in town this week endeavoring to purchase horses for the German army. He did not meet with very much success, although he admitted there were many good horses in this vicinity. The German Government allows but \$65 a head, and the horse must be very good before the agent will purchase. The sum of \$50 was offered in many cases, but refused. Dr. Forrester supplemented his remarks with the statement that the American Government was much more particular in buying than the German Government.

### COLUSA.

**TAR WEED IN DEMAND.**—Colusa Herald: There is a commodity being shipped in large quantities from Colusa that is generally considered an eyesore and nuisance upon the farm. Its technical name is grandallia, but it is better known as tarweed. It grows wild upon the plains and is very prolific in its growth. An acre will produce two or three times the quantity of weed that it will hay and sell for four times as much money. At present it is quoted at \$30 per ton. Thus far this season John Olvey has shipped thirty tons to San Francisco and J. W. Thompson one ton, the latter having about twenty tons yet to deliver. The weed is used extensively in preparing cough mixtures and is said to possess medicinal properties of a high order. There is plenty of it in this section and much more would be cut and shipped if hands could be obtained.

### HUMBOLDT.

**SHEEP SALES.**—Arcata Union: A band of sheep consisting of 981 head passed through Arcata Wednesday on the way to Eureka, consigned to Taft & Co. of San Francisco. Of this number 520 head were furnished by J. H. Hooker, 300 by

B. Croghan and 161 by Lawrence Ford. The sheep were purchased by Mr. Demsey for the company and the average price paid was \$3 per head. On the 23d of September Thomas Bair will sell about 1200 head to the same company.

**CROP RETURNS.**—Arcata Union: The threshing on Arcata bottom will be completed in another week. The barley crop has been very good this year, averaging about seventy-five bushels to the acre. The pea and oat crops have been very poor, averaging about twenty bushels, while in former years the average was eighty bushels to the acre. Oats have been very poor, only a few farmers having any to thresh.

### INYO.

**MOVING CATTLE.**—Inyo Independent, Sept. 7: The Crocker Bros. of Big Pine passed through Independence yesterday morning on their way to Monache to bring their cattle out of the mountains before another fall of snow. They will take their beef cattle to Bakersfield and will winter the stock cattle on their ranch at Big Pine and their range in Deep Spring valley.

**GOOD HONEY YIELD.**—Inyo Independent: John Baxter shipped two and a half tons of water white honey to Mojave a few days ago by J. Strohmeyer's big team. Mr. Baxter informed us that his bees are making more honey, and that prices are better this year than for several years past.

### KINGS.

**WINERY STARTED.**—Hanford Sentinel, Sept. 13: The Hanford winery began operations Thursday, about twenty tons of grapes being received. Manager Sargeant states that the percentage of sugar is rather low and warm weather is hoped for. The grapes will come in pretty lively from now on.

**PRUNE CROP.**—Hanford Sentinel: The prune crop seems to be a disappointment to fruit men who have succeeded in drying some of the early varieties. The prunes appear to be first quality before drying, but seem to be devoid of sugar and dry down to a mere nothing. The cool weather is the only means of solving the difficulty. Santa Clara county complains the same way.

**APRICOT PITS.**—Hanford Sentinel, Sept. 13: F. E. Brown, manager of the Guggenheim apricot meat extractor, has completed the season's run in this county and the fore part of the week removed the machinery of the establishment to Vacaville, where he has about 100 tons of apricot pits awaiting his arrival. The season's run in this county was very satisfactory. One hundred and ten tons of pits were shucked, and a carload of picked meat was barreled yesterday and loaded for shipment to Amsterdam. Fully another carload yet remains in the warehouse to be picked over and shipped some time in the near future.

### LAKE.

**PLENTY OF PEARS.**—Clear Lake Press, Sept. 13: J. B. Laughlin has cut fifty tons of pears and is still kept hard at work in his dryer, which would seem to indicate that there is not such a failure after all.

### ORANGE.

**SPLENDID GRAPE CROP.**—Santa Ana Blade: Grape picking on the Hewes ranch has been finished and the crop has been a fine one. Over 100 tons of raisin grapes were harvested and the quality never was excelled in the county. The lemon and orange crop on the same ranch is giving promise of a splendid yield, and from thirty to forty carloads of each are expected.

**WALNUTS.**—Anaheim Gazette, Sept. 13: At a meeting of the directors of the Deciduous Fruit Association of Anaheim, held on Saturday, Sept. 8th, George A. Hunter was appointed manager of the walnut packing house at the old Southern Pacific depot, where the packing has been done for several years. The warehouse will be opened on Oct. 1st. Mr. Hunter will call on the different members of the association soon to get an estimate of the quantity of walnuts in this year's crop.

### LOS ANGELES.

**BIG PROFIT IN ORANGES.**—Covina Argus, Sept. 8: Last week we cited one of the many instances of the satisfactory returns which have been received for lemons during the past year. To-day we would tell our readers of the profits made in oranges during the past season. Samuel Fesler is a well-known character in this community and his habitual happy smile is but the outward sign of the contentment which prevails within. He owns a 10-acre ranch on Badillo street, 8½ acres of which are planted to oranges, and he received this season for the fruit off of these trees \$4048.06 net. Anyone who doubts these figures can verify them by examining the books of the Covina Citrus Association, of which he is a member. Is

it any wonder that orange groves are selling for \$1000 per acre when such returns can be realized from a well cared for orchard?

### MERCED.

**SWEET POTATO MEN ORGANIZE.**—Merced Sun, Sept. 14: The sweet potato growers of Atwater have perfected their organization; and, like the raisin growers of Fresno, they are now in a position to demand and secure a fair price for their product. During the past season or two it has been the custom for the growers to accept whatever was offered for their potatoes; and, while the price offered was usually a fair one, still now and then a buyer from San Francisco would come into the community and, finding a grower in need of money, would get his crop at a lower figure than other growers were demanding. The buyer was then enabled to undersell other buyers in the San Francisco market, thus causing confusion and dissatisfaction all round. One of the objects of the combine just formed is to maintain not only a fair price, but also uniformity of price. Two or three meetings of the growers have been held in the Atwater hall, and the movement seemed to have the sanction of all interested parties. Attorney Frank H. Farrar of Merced was employed to draw up the necessary articles of agreement and by-laws, and a meeting was held in Atwater last night for the purpose of getting signatures to the agreement. The attendance was good, and eighty signatures were secured at this first meeting. There are 120 growers in the Atwater district, so the signatures secured at the first meeting constitute two-thirds of them. J. B. Osborn, one of the directors of the association, states that the signatures of the other forty growers, or nearly all of them, will be secured within a couple of days.

### NAPA.

**WINE MAKING.**—St. Helena Sentinel, Sept. 13: Wine makers are beginning to crush grapes this week. The crop is generally light, but in sections that were not visited by late frosts they go high in sugar. The prices paid are \$16 and \$17 per ton, with a slight increase for extra good grapes.

### SOLANO.

**BUYING CATTLE AT SUISUN.**—Solano Republican, Sept. 14: After having made two or three trips to Suisun to purchase cattle and sheep, John Lawlor of Shellville, Sonoma county, has concluded to come here regularly. Mr. Lawlor says the stockmen of this vicinity have given Suisun considerable of a reputation as a cattle trading center, and he finds it a good place to carry on his business. He was here Wednesday and Thursday to round up some stock purchased of B. F. Rush and C. E. Barnhart.

### SANTA BARBARA.

**FARMERS' CLUB.**—Santa Barbara Press, Sept. 13: As a result of the Farmers' Institute held recently in Goleta a farmers' club has been organized with thirty members and the promise of more joining. The club is to meet once a month and is composed of the most prominent farmers, their wives and daughters. The following officers have been elected: President, F. E. Kellogg; vice-president, D. M. Culver; secretary, J. D. Langman; treasurer, E. A. Hollister.

**HORTICULTURAL SOCIETY.**—Santa Barbara Press, Sept. 13: The Horticultural Society held its regular monthly meeting in the new hall in Montecito Wednesday. The session was well attended and many important points in horticulture were discussed, especially the question of what was the best way to produce a crop of lemons at certain times. This brought out a very able discussion from Mr. Kahles and others. The olive crop was discussed. The general report was that the olives were a short crop this year. The deciduous fruits and others were given an overhauling, and the general opinion was that the warm winter was responsible for the way the trees behaved.

### SANTA CLARA.

**BAD WEATHER.**—Campbell Visitor, Sept. 14: The past week the weather has been very bad for prune drying. It has been cool and cloudy. Tuesday afternoon and night it rained quite freely, and the Fruit Union stopped receiving fruit. If we get a good warm spell for a week or two, no special damage will result; but warm weather must be had in order to save the remainder of the prune crop from serious damage.

**GILROY PRUNES.**—Gilroy Correspondence San Jose Mercury, Sept. 16: The California Fruit Packing Company has decided to handle the prune crop of the Gilroy valley in the Cured Fruit Company's warehouse here without moving it to San Jose. It was recently announced that this part of the agreement of the Cured Fruit Association with the local growers would not be covered until next

year, when the Packers' Company would erect a warehouse to cost not less than \$10,000 for the service and secured by that time terminal advantages with the Southern Pacific Company. When officially notified of the intended postponement of a direct handling of this season's pack, some of the growers considered they were not bound by the agreement. The changed front of the Packers' Association will find general satisfaction among growers and the business community. Boxes of regulation size are to be sent for packing, and orders will be filled and sent direct to destination. All packages are to be branded "Gilroy Fruit."

**GRAPES RIPENING FAST.**—Los Gatos correspondence San Jose Mercury, Sept. 13: Grapes are ripening fast and in a week or two the wineries here will start up. The crop is larger than last year and will likely command good prices, as they are selling from \$20 to \$23 per ton in Napa and Sonoma counties, and they ought to bring that much here. There will be more competition than formerly, as Mr. Delpech has erected a very large winery on the lot just north of the old Los Gatos cemetery. He has been in the wine making business for many years in the Santa Cruz mountains and is prepared to handle all the grapes he can get. The Rankin winery and the old Austin winery, run by Mr. Malpas, will also want all the grapes they can get, so it looks now as if good prices will prevail.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian, Sept. 13: A carload of apples for the Australian market went out yesterday. There are about forty refrigerator fruit cars on the side track at Pajaro. For the past week from Watsonville depot twenty-five cars of apples were shipped East and three cars to Los Angeles; total for the season, forty-two cars. A visit to M. B. Tuttle's orchard, near the Salsipuedes, will prove to any one an interesting object-lesson of the value of irrigating even Pajaro valley orchards. Last April he had his pumping plant at work for two weeks, sending out a big stream of water to the trees of his orchard. The improvement was rapid, and the orchard has an enormous crop of high-grade apples. Irrigation pays. There is no fruit district of California which can prosper without it through all seasons.

### SAN JOAQUIN.

**HARVESTING SUGAR BEETS.**—Lodi Sentinel, Sept. 8: A force from here is about to commence work on the last of the sugar beets near New Hope. Most of the crop was harvested a month ago, but this lot was planted later than the former, and a lay-off was necessary until they should ripen sufficiently. There remain about 250 acres in the New Hope country yet, but the force will soon have them out of the ground and on the way to the refinery at Crockett. What the beets in this neighborhood lacked in quantity was made up to a certain extent in quality. The Lodi beets made the highest saccharine record of any received at the refinery, averaging 20% of sugar.

### SOLANO.

**CANNERY FOR RIO VISTA.**—Vacaville Reporter: The fruit growing industry lying along the Sacramento river seems to demand the erection of a cannery. Rio Vista has been selected as a point at which to build. The people of that place have arranged to secure a suitable location and offer it for the use of the cannery. It is certainly a good idea, and one which will prove of great benefit to Rio Vista. That town, lying near to the confluence of the Sacramento and San Joaquin rivers, and having admirable facilities for transportation, should prove a very desirable location, particularly as the salmon fishing industry might furnish a source of profitable activity during a portion of the year.

### SONOMA.

**CARE OF BEES.**—W. A. S. in Sonoma County Farmer: The white sage blossoms have disappeared in the hills and the bees which have worked upon them will now rest until the bloom appears on the manzanita somewhere about Christmas. While a colony of bees would find some nectar about a dwelling surrounded with blossoming plants and shrubs, there should be some other source from which they could secure a supply of honey to store in the hive—a few apple trees, for instance. A great many of our favorites in the garden have no nectar for the bees. The substance the bees gather from drying fruit, broken fruit in the orchards and decaying grapes in the vineyards is not honey. The bees will take it to the hives and put it in the cells if they are short of stores, however. Bees do not need to be housed or put in a cellar in this country in winter. Hives should have tight-fitting, water-proof roofs, which should be securely fastened with hooks or clamps to the hives, and should be from 4 to 6 inches above the ground.



## THE HOME CIRCLE.

## Intuition.

"How does it know—this tiny hidden thing—  
Within its wilderness of tangled grass,  
The hour when summer's languid foot-  
steps pass,  
And southward-flying birds are on the wing,  
While Earth is dumb with August's silencing?  
How does it know the time for purplish haze,  
Or guess the wondrous transformation scene,  
Which sets the field and forest all ablaze?  
Yet in shrill notes, from drowsy ways of green,  
Breaking the swell that passing summer sways,  
The cricket first proclaims the autumn days."  
—Ainslee's Magazine.

## Ambition Defeating Love.

"But money will not buy happiness," said the girl, looking earnestly up at the man beside her.

"Perhaps not from your point of view," said Arthur Menick. "But I, who am old and at the cynical stage of life, think money can buy anything—even happiness. The difference is this, Miss Katherine, you are standing upon the threshold of life, with glad, lenient eyes, while I am nearly forty." He smiled down into the eager, upturned face with open amusement.

"Oh, but you are mistaken, Mr. Menick," cried Katherine. "I am not as totally ignorant of life as you think me. I know that money is a good thing to have, perhaps the best thing one can have except contentment. But," she added bravely, "I don't think it will always buy happiness."

"Always," repeated Arthur Menick, laughing; "that is something of a concession. Some time you will agree with me that under certain circumstances it will purchase anything."

"No, no," cried the girl, gayly, "I will not even give in that far. But don't you think?" she hesitated an instant, then went on, "don't you think a great many people have happiness within their reach but they will not take it?"

Arthur Menick looked at her keenly. "That may be," he said slowly, "if one is seeking to have his highest ambition fulfilled he is apt to overlook happiness in whatever guise it may come."

Katherine leaned back and Menick turned his attention to the cob who was growing restive under a new bit. Now and then he glanced at his little companion, but seeing the thoughtful expression on her face, he did not continue the conversation. He would have been surprised had he known she was thinking of no person other than himself.

The girl's life had not been a very happy one. She was the eldest of a large family, and poverty was not the least of her trials, and she knew, only too well, the power of money. But she was young, and with the ardor of youth she clung to the ideal that only love could bring happiness—for to her happiness was love. At present she was studying modeling at the Art Normal from nine in the morning until two in the afternoon; she spent the rest of the day in making those charming little hats and gowns that Arthur Menick admired so openly. Katherine was only too glad to accept his invitations for the long delicious drives in the smart trap, with Jerry, in green livery, sitting up behind so straight and solemn. Those drives were the only bright spots in her uneventful life.

The man by her side was a self-made man. He had a good education, to be sure, but he had only secured it by his own efforts; and now that he had amassed his wealth, he was determined his highest ambition should be attained. And his highest ambition was to enter society—not that he wished to become a social lion, only a member of that enchanted circle where he would be invited to dinners and receptions of certain influential men and women. He had a great many things in his favor, for he did not look plebe-

ian, and he carried himself with assurance. He was a small man, slenderly built, with straight, refined features and a clean-shaven face, with the exception of a mustache that shaded his upper lip. His linen was immaculate and his clothes of the latest cut and finest material, but never loud. And this man's highest ambition was to become a member of a select set, and he thought, in fact he almost knew, his wish could be gratified if he married a certain young woman of his acquaintance—a tall, red-haired girl with a large nose and a great deal of enthusiasm for tennis. Miss Converse was penniless, but Arthur Menick could overlook these little defects, for she had an undisputable social position and a pedigree that extended to William the Conqueror.

Yet he never sought Miss Converse's society unless ambition urged him on in the role of suitor. It was Katherine Loudon who amused and entertained him with her gay chatter and pretty, unaffected manner. And it was Katherine now who broke the silence with an exclamation of delight.

"Look!" she cried, pointing to a hawthorne hedge in full bloom. "Isn't that lovely?"

"It is more than lovely," said Menick. "So lovely that we must have some." And he checked the cob as he spoke.

"Oh, no," said Katherine, drawing back. "It's a private residence and—some one might see you."

"Nonsense," laughed Menick, as he sprang to the ground. "I don't see any signs about 'no trespassing' or 'keep off the grass' or anything of that kind." And going to the hedge he rifled it of its choicest blossoms.

When he returned he laid his fragrant load in Katherine's lap and she bent her head about them in silent delight, all her artist's nature aroused by their beauty.

"What a picture they would make," she said, softly touching the pearly petals. "If I could only take them home and paint them—but," she added regretfully, "the thorns are so long and sharp. One has pricked me already."

And she held out the little gray-gloved hand, showing him the tiny drop of blood that darkened the skin.

"Did it go through your glove?" asked Arthur, taking her hand in both of his own. "Poor little hand! If I had known the thorns were so sharp I would have broken them off. I don't want anything I give you to cause you the slightest pain—Katherine."

It was the first time he had spoken her christian name, and he lingered over it as if the sound were pleasant to him. The pink in Katherine's cheeks grew deeper and an added luster brightened her eyes. She played with the flowers in her lap and spoke idly of the beauty of the day; but her heart was beating quickly under the little gray gown and rosy fancies flitted through her head. Oh, what a beautiful day it was, with the sky so blue and the sunshine so warm—and it seemed to her the birds had never sung so sweetly before. It was good just to be alive. Arthur Menick thought so too as he looked into the soft brown eyes and listened to the sweet young voice. He unconsciously tightened his clasp on the little hand and the look in his eyes was more ardent than the occasion demanded. Katherine's own eyes drooped before his gaze and her words died on her lips. For how could she talk when he looked at her so earnestly, so tenderly?

A sudden sweet silence fell upon them. Miss Converse vanished from the man's mind and in her place the little gray figure reigned. Katherine's thoughts were in a happy tumult and her color came and went. The birds still sang and the air was fragrant with delicious odors of spring. Arthur Menick leaned forward as if to speak—then he awoke to the situation.

Although it was pleasant it was certainly not the thing to stand on the public road holding a young woman's hand, however lovely the hand or the maiden.

"What!" he said to himself, "am I going to fall in love at the age of forty!"

I, who am about to attain my highest ambition?"

So he dropped the little hand and mounted to his high seat beside her, while the diminutive Jerry, the most sedate and desirable of chaperons, climbed to his place behind them.

The drive home was a silent one, for the conversation dragged and Katherine knew with a woman's keen intuition that something was wrong, but not knowing the cause she could not rectify it, so she was silent.

When they reached her door the day was drawing to a close and the girl felt her spirits sink with the setting sun.

"Good-bye, my little friend," said Arthur Menick, shaking hands with her. "I may not see you soon again, but I know your artistic efforts will meet with success, and I hope happiness will always be yours." There was a quizzical expression in his gray eyes as he looked down into her troubled face.

"Thank you," said Katherine slowly, and clasping her flowers to her breast she turned to enter the house. Arthur Menick's face softened as his eyes followed the little gray-clad figure with the pathetic, despondent droop about the shoulders. Then with an impatient exclamation at his own foolishness he drove rapidly away.

A few days later, when glancing over the society items in the newspaper, Katherine read that Mr. Arthur Menick and his fiancée, Miss Converse, and her mother had gone abroad to spend the summer in Switzerland.

Eight years later the sun streamed into an artist's studio, touching the plaster casts on the shelves and playing about a tarse in the corner. But the rays rested longest on Katherine Loudon, who stood in the center of the room before a modeling stand which upheld two life-size figures.

She was thirty years old, but time had touched her gently, and, being small and slender, she would always retain her girlish form. It was only in her face the womanhood could be detected—in the firm curves of the sweet mouth and the resolute chin.

Intent upon her work, she did not hear the knock at the door and she was startled when, aroused by his step, she turned to find Arthur Menick standing near her.

"You!" she exclaimed in glad surprise. "Why, I thought you were still abroad. What kind wind has blown you hither?" And she extended her hand with the sweet welcoming smile he remembered so well.

"No: I have been in New York for the last three months," he answered, "and I arrived here this morning. So you have attained fame, Katherine, and you are a sculptress?"

"You flatter me," said Katherine, gayly, "I am afraid I am only a poor attempt at a sculptress, but I love my work. I see you are scanning my room. Please be lenient, for I know the corners are filled with dirt and these casts have not been dusted for weeks. If I had known I was to have such a distinguished visitor," and she swept him a mocking courtesy, "everything should have been in its place."

"I am blind to the dirt, Katherine," said Menick, "and it is good to see you again."

"I think it always pleasant to meet one's friends after an absence of eight years," said Katherine Loudon, cheerfully. "But how inhospitable of me—I have not even offered you a chair." With a quick movement she removed some modeling tools from an oaken bench and motioned him to the seat.

"You must have a great many adventures to recount, being a much traveled individual," she said, seating herself opposite him. "Did you bring home numerous tiger skins? For, of course you were down the Nile."

"Yes," said Arthur Menick, smiling as he noticed her old vivacious manner. "I went down the Nile, but I cannot boast of one tiger skin. I am not very enthusiastic about such game, and most of my time was spent in Paris after I recovered from the fever."

"Fever!" repeated Katherine. "Then you have been ill?"

"For two years. I took it in Rome

and it left me with a bad cough that has hung on most tenaciously."

"Perhaps you have come home too soon," suggested Katherine. "You will find this side of the Atlantic quite a change compared to sunny France."

"But I could not stay away any longer," said Arthur Menick. "I had an indescribable longing for my 'ain countree.'"

"I can understand," said Katherine, sympathetically. "You have been absent a long time and it must be a pleasure to return. Did your wife come with you?" he asked.

"My wife!" repeated Arthur Menick, bewildered. Then he understood her. "No, Katherine," he said. "I am still a crusy old bachelor, just as when I left you. I have no wife to return with me."

"But I thought—I understood!" said Katherine, a warm red dyeing her face.

"Yes," said Menick, coming to her assistance. "I know I was engaged to Miss Converse, but she preferred to marry some one else."

"I am sorry," said Katherine simply. "That is kind of you," said Arthur Menick, smiling slightly. "But you are always kind, my friend. And now may I look at your work?" And without waiting for her reply, he arose and went to the stand that upheld the two forms of clay.

One of the figures was that of a tall, beautiful youth, standing erect, with his head thrown back, and his eyes looking eagerly forward, as if he saw the future, with all his desires fulfilled, unrolled before him.

Crouching at his feet was the figure of a girl, her head also thrown back to scan the face above her. But there was no eagerness in her gaze, for the eyes and every feature of her face portrayed despair—such unutterable, hopeless despair, that Arthur Menick turned away with a shudder.

Katherine, what was your object?" he asked.

"I don't know that I had an object," said Katherine: "only an idle wish to picture a woman's first love—unreciprocated."

"But," said Arthur Menick, "the man finding out his mistake, can retrieve himself and make her happy yet."

"No," said Katherine, shaking her head decidedly. "A woman's first love, so tender and sweet, can never be awakened again when it has been crushed. The ashes can never be rekindled into life."

"Never!" pleaded Arthur Menick.

"Never," repeated the woman firmly. For a few minutes they stood in silence before the clay figures, then Arthur Menick took his hat and gloves from the oaken bench.

"There is something I must tell you before I go," he said, and Katherine thought his face looked drawn and haggard. "Eight years ago you told me money would not buy happiness, and I disputed your conviction; but—you were right."

"Thank you," said Katherine gravely.

"Are you happy?" he asked, looking at her curiously.

"No," answered Katherine frankly: "not happy, but I have my work and I am content."

Arthur Menick walked to the door, then paused with his hand on the knob. "One thing more," he said. "What do you call it?" and he pointed to the clay figures in the center of the room.

"I call it," said Katherine Loudon, slowly, "Ambition Defeating Love."

The door opened and closed and she was alone.—Eleanor Madeleine Aikin.

"PROFESSOR, are you ready?" asked his friend, opening the door of his study and putting his head inside the room. "Ready?" echoed the absent-minded man at the desk; "ready for what?" "Your wedding, of course. Have you forgotten you are to be married at eight o'clock this evening?" "I knew," muttered the professor, struggling with his reverie and looking in the pigeon-holes before him for his hat and overcoat. "I knew I had an engagement of some kind for eight o'clock. I'll be ready in a moment."



### To a Mosquito.

O most elusive bird!  
Whose coy, contralto voice is heard—  
Zing! Zing! Zing!—through all  
The small  
Wee  
Hours of the night—gee!  
But you  
Can do  
An awful lot  
Of damage ere a swift swat  
Hath laid you low!  
You are so  
Small, and yet so mountainequely great,  
Particularly late  
At night  
When you light  
On the end of our nose,  
And your machete goes  
In so deep  
That sleep  
Jumps through the window and we weep  
And tear  
The air  
In despair.  
O most ferocious bird of prey,  
Say!  
When you and General Humidity get  
together  
Poor mortal man doesn't care whether  
School keeps or not!  
What!  
Even as I write  
You bite!  
Biff! slap! slap!  
Mayhap—  
But, no!  
There you go  
With the same fiendish zing! zing!  
O baleful thing,  
Why don't you stay  
Over the Atlantic way,  
Where you belong,  
Instead of coming here with your song  
Of blood—it's all dead wrong.  
You advance agent of insomnia, you!  
Go to!  
Go to or three or four for that  
Matter—s'cat!  
But, alas! you continue to thrive  
On language that will drive,  
As a rule,  
Any self-respecting ghoul  
Away from his trade;  
But you are not made  
That you can wreck—  
That way.  
Statisticians say  
They  
Have figured—  
What! landed again! in the neck!  
Well, I'll be jiggered!

—George Hobart.

### The Fashions.

The high collar, which is turned over in close fitting style, and the full three-quarters length, are the striking features of the latest coats for present and autumn wear. Another conspicuous characteristic of these garments is the dainty coloring of the Oriental embroidery on the white satin cuffs and collars.

White waist girdles are extremely fashionable, and are made after a variety of fancies. One is a corselet, which is shaped to the figure, another is a satin or silk band, which drapes itself in natural folds, and the third is a white grosgrain ribbon about 2 inches wide. For dressy occasions these girdles are covered with white or cream colored lace, and are closed with buckles of quaint design or richly jeweled.

Simplicity in gowns is the cry for the future, while the most elaborate ones are to be seen. The gowns one sees are ruffled and tucked, and are masses of insertion and puffing and lace. Yet the gowns to come, it is said, will be simple, and already there are low, roundcut necks with which our grandmother's lace and embroidered collars can be worn, and there are to be large sleeves. There is no doubt that the sleeves are to be full, as the many designs in puffed sleeves now in evidence indicate.

Tucking, edged with narrow gold lace, is seen in the vests of wool gowns; and a particularly good finish for the bottom of a skirt is furnished by a number of wide folds, looking like deep tucks, and edged with gold lace. It is said that gold lace will also figure largely in the winter millinery.

A traveling convenience more than usually welcome at this time of summer migration is an umbrella that doubles up in the middle and can be easily carried about in a grip or trunk. When rolled up in its case or extended for use

Around the edge of many boleros on the new wool gowns there are, instead of the ordinary lace border, embroidered holes, through which is drawn velvet ribbon or soft lace or chiffon ending in choux on the bust. It is exactly like any other stylish umbrella, and is so well constructed that it does not collapse unexpectedly and inappropriately. Umbrella and parasol handles were never more varied than they are this year, and are shown in ebony, sterling silver, natural wood, fine pearl, horn and Dresden. The parasol of the moment is covered with taffeta in one of the varied petunia shades.

A mousseline de soie, which is admirably adapted for a ball gown, shades through various delicate tones of blue, and is embroidered with silk dots, which are shaded to correspond, while over all is a raised scroll design embroidered in black silk.

Broad velvet cravats and girdles, gold fringed and drawn through gold clasps, are worn with soft wool morning gowns, for which they furnish almost the only trimming.

The abbe collar, made of linen or wired lace and turning down in tabs in front like a priest's collar, is a fancy of the moment in Paris.

A new trimming much in use among Paris dressmakers is a scallop of glace silk united to a scalloped edge of the gown material by open work herring-boning. This herring-boning is seen also above flounce hems, down skirt gores, and, in fact, wherever an open work effect is desirable.

The latest thing in handkerchiefs is a very tiny square of cobweblike lawn edged with lace. The absence of a pocket in gowns is the incentive for this change in size, which makes it possible to wear the handkerchief inside of the glove.

Necktie clasps are very much in evidence on the fall street costumes. The fashionable cravat, which appears upon at least three out of every five of these gowns, and is most frequently of black velvet or soft black satin, is much more effective when drawn through such a clasp than when tied, and the touch of gold harmonizes with the gold buttons and braid which are tolerably sure to lurk somewhere about the gown. Flat and heavy dead gold, dull silver or gun metal rings are perhaps the most knowing of these clasps; but the jewelers, in response to the demand, are now bringing them in jewelled designs, and in the antique gold work that is a present fad. The latter are good in style, and a single cabuchon gem set deeply in the gold and agreeing with the color scheme of the gown adds to the effect, but the heavily jewelled clasps are a trifle too pronounced and rob the cravat of distinction.

### Cuban Cooking.

The kitchens of the Cubans are always either in the courtyard back of the house or on the roof. Unlike the Irish, they never dream of making the kitchen a sitting or dining room. And, unlike the Americans, they do not cook three times a day. Twice a day the Cuban servant or housewife goes to her kitchen and does her cooking; at 10 o'clock, to cook the breakfast, which is served at 11, and about 6 o'clock to cook the dinner, which is served at 8. In the morning at 6 or 7 o'clock coffee is served, though for this purpose the kitchen is not used. The coffee is cooked in a French coffee pot on the sideboard of the dining room. As for coffee, nowhere in the world, Paris and the German cities included, do they make such excellent coffee as that made by the Cubans. They use the coffee grown on the island, and oftentimes the housewife picks the beans from a coffee bed in her courtyard just as we would pick green peas in our own gardens. Cuban coffee is very black and strong, but never muddy like the Turkish. The coffee bean is usually cheap and plentiful, and the Cuban cook has learned that to make good coffee and not brown water he must not be too sparing of the raw material. He never allows less than a full teacup of ground coffee to a pint of water.

## DOMESTIC ECONOMY.

### Hint for the Table.

There are more ways than one of treating oatmeal. As a porridge, it may be varied by the addition of dates. The dates should be washed and stoned, then added to the oatmeal just before serving. Do not allow it to cook after the dates are put in; just let them get heated.

Or, again, make four ounces of oatmeal into a paste, that is fairly stiff, with two ounces of butter, a little salt and a gill of milk. Roll this out three-quarters of an inch thick and cut into fingers. Heat a frying pan, lay the fingers in and bake them, turning them to cook each side. If these are put into the oven they become like piecrust merely. Serve them very hot and crisp.

A combination of oatmeal and apples is a trifle out of the usual run. Mix in a saucepan one cup of oatmeal with one tablespoon of butter, one of lemon juice, half a cup of sugar and one cupful of milk. Cook five minutes. Draw the saucepan to the corner of the range, add while stirring two eggs, half a teaspoonful of baking powder and two apples pared and cut into dice. Turn the whole into a buttered cake mould and allow to bake in a moderate oven until it swells and has a yellow color. Sprinkle with sugar and serve.

### Cooking Belgian Hares.

There are very many ways of cooking the hare, and variations to suit the tastes of individuals will occur to almost every housewife and caterer. We present a number of those considered the best by Dr. B. C. Platt in his new book, entitled "The Bonanza Rabbitry Manual." Hares between three and six months old are the best for cooking, but older ones are good, if they are fattened rapidly. An easy way to determine whether a specimen, bought dressed, is young, is to try the jaw between your thumb and finger. If this breaks easily, the hare is a young one. In young hares the coat and claws are smooth, but are the opposite in older animals. The ears of the young may be easily torn. If a hare has been killed recently the flesh will be dry, white and sweet. If for a longer period, it will be blue and unattractive in appearance. Most people prefer that hares for the table should be killed one day before being eaten.

Hares intended for the table should be rather close-penned for ten days or two weeks before killing, and should be fed on cured grass, rolled oats, rice, a little sugar and scalded milk. If fed on coarse and dry food the delicate flavor will be lacking. Young bucks caponized when two or three months old make the best eating. The more rapidly the hare is fattened for food the better the flavor. Great attention is paid to these fine points in the Old World, where the Belgian has long been the delight of epicures.

To our minds the best way of cooking the hare is to steam it in a double cooking dish, such as those used for making delicate puddings, mushes, etc. Add just sufficient water to fairly cover the meat. Then let it steam for about three hours in its own juices, seasoning while cooking with pepper and salt to taste. Butter may be added or the gravy may be thickened with flour or cream; the latter makes a delicious dressing. Serve hot on toast. Prepared in this way the meat is very tender and appetizing. This is the best way of cooking for invalids, as all of the juices are preserved in the gravy and the meat is so delicate and tender that it is readily digested. No other meat dish can be so appetizing and at the same time so harmless as this one.

A lady friend of ours has recently given us an attractive variation of the above by frying the meat, after it has been steamed as above directed, to a delicate brown in a batter of egg and bread crumbs.

Hare pie is fully as satisfactory as chicken pie. Boil for perhaps an hour, or until the meat is fairly tender. Pre-

pare a biscuit crust the same as for an old-fashioned chicken pie. Line the bottom and sides of a pan with this, place the hare and the gravy inside and cover with more of the crust. Also, inclose half a dozen cubes, three of lean and three of fat salt pork, each about 2 inches square. Bake in a quick oven from half to three-quarters of an hour, or until the crust is well browned. For those whose digestion is fairly robust this is a splendid way to cook the hare.

Stewed hare should be prepared by boiling two or three hours, according to the age of the hare, till the flesh drops off the bones; thicken the gravy with flour and milk, preferably a little cream, and add a piece of best butter. Always have considerable water over meat while boiling. An abundance of thickened gravy spread upon toast makes a dish fit for any epicure.

Mrs. Rorer, the eminent authority on cookery, recommends the hare as a delicate subject for a fricasse. Her directions are to first brown butter in a hot iron skillet. Then fry the hare brown on both sides. Next cover with hot water and stew, say, for an hour, or until thoroughly tender, seasoning to taste. At the end of the stewing let the hare fry down. This makes a most delicious dish and is preferred by many.

### How not to Cook Belgian Hare.

Once on a time there was a man  
Who had a Belgian hare.  
Its pedigree was 'steen feet long,  
Its breed was very rare.

Regardless of the great expense  
(For he had lots of money),  
The man he got his shotgun down  
And killed his fancy bunny.

And then he gave him to the cook  
Who stewed the quondam pet  
And minced and spiced him till he was  
A Belgian hare croquette.

The man he gave a jamboree  
To all the friends he knew  
Inviting many guests to come  
And taste the fancy stew.

The guests enjoyed the banquet, but  
Before the feast was done  
They went into convulsions and  
Fell dying one by one.

The doctors came but didn't stay  
For they could plainly see  
The foolish guests had tried to eat  
That rabbit's pedigree.

—S. F. News Letter.

### Hints to Housekeepers.

Neuralgia may often be speedily relieved by applying a cloth saturated with essence of peppermint to the seat of pain.

When binding up cuts and wounds use linen, not cotton, as the fibers of cotton are flat and apt to irritate a sore place, while those of linen are perfectly rounded.

Never wash an omelet pan; wipe it clean with pieces of paper, then rub with a clean, dry cloth. If the pan is treated in this way the omelets will be less apt to stick or burn.

A cool refreshing drink for summer can be made from the juice of four oranges, four lemons and one-half pint of grated pineapple. Sweeten the whole to taste and serve ice cold.

High collars cause a number of evils which are not easily remedied. They spoil the carriage of the head, the pretty lines of the neck, strain the nerves of the eyes, and bring on headache.

If when you are baking anything the oven gets too hot, put in a basin of cold water instead of leaving the door open. This cools the oven, and the steam arising from the water prevents the contents from burning.

### The Oven—How to Manage its Heat.

Rules for the inexperienced about heating the oven: On baking day place a piece of white paper in the oven. If too hot the paper will quickly blacken and burn up, while if it turns delicate brown the oven is right for pastry. If it turns dark yellow, cakes may be baked; if light yellow it is safe to put in biscuits or sponge.



# S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Sept. 19, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Oct.	Nov.
Wednesday.....	75 1/4 @ 74 1/4	76 1/4 @ 74 1/4
Thursday.....	74 1/4 @ 75 1/4	75 1/4 @ 76 1/4
Friday.....	76 1/4 @ 75 1/4	77 1/4 @ 76 1/4
Saturday.....	76 1/4 @ 75 1/4	76 1/4 @ 77 1/4
Monday.....	76 1/4 @ 77 1/4	76 1/4 @ 78 1/4
Tuesday.....	76 1/4 @ 77 1/4	77 1/4 @ 78 1/4

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	Sept.	Dec.
Wednesday.....	6s 0 1/2 d	6s 3 1/2 d
Thursday.....	6s 1 d	6s 3 1/2 d
Friday.....	6s 2 d	6s 4 1/2 d
Saturday.....	6s 2 1/2 d	6s 4 1/2 d
Monday.....	6s 2 1/2 d	6s 4 1/2 d
Tuesday.....	6s 2 d	6s 4 d

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec., 1900.	May, 1901.
Thursday.....	1 10 1/4 @ 1 10	1 15 1/4 @ 1 15 1/4
Friday.....	1 10 1/4 @ 1 09 1/4	1 15 1/4 @ 1 15 1/4
Saturday.....	1 10 @ 1 10 1/4	1 15 1/4 @ 1 16
Monday.....	1 10 1/4 @ 1 10	1 16 1/4 @ 1 16 1/4
Tuesday.....	1 09 1/4 @ 1 09 1/4	1 15 @ 1 16 1/4
Wednesday.....	1 09 1/4 @ 1 09 1/4	1 16 @ 1 16 1/4

## WHEAT.

While the wheat market in this center is not wholly stagnant, more business than is being done could be readily transacted without imparting an air of great activity. A little more firmness was developed in Eastern and foreign centers, but beyond being reflected here to a slight extent in Call Board values, it was without appreciable effect on the local market. Shippers showed no desire to operate heavily at old figures, much less to pay an advance. Foreign markets are in better shape than at corresponding date last year, California wheat bringing in Liverpool 7 1/2 @ 10c. per cental more than it did a year ago, but stiffer ocean freight rates are absorbing the difference, and that there will be much relief on this score in the near future is not now foreshadowed, although, as has before happened, a change for the better may come when least expected, and may be brought about through causes as yet unseen and undeveloped. Ships in the wheat trade are not numerous and are not being rapidly dispatched. Four cargoes were cleared, however, from this port since last review. The United States visible supply east of the Rockies was given at 13,927,000 bushels, indicating an increase of 2,191,000 bushels for the week. The world's visible supply increase for the week is given at 5,118,000 bushels.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, \$1.09 @ 1.10 1/4.  
May, 1901, delivery, \$1.15 @ 1.16 1/4.  
Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at \$1.09 1/2 @ 1.10 1/4; May, 1901, \$1.16 @ 1.16 1/4.

California Milling..... \$1 06 1/4 @ 1 10  
Cal. No. 1 shipping, alongside..... 1 05 @ 1 06 1/4  
Oregon Valley..... 1 05 @ 1 06 1/4  
Washington Blue Stem..... 1 05 @ 1 10  
Washington Club..... 1 02 1/4 @ 1 05  
Off qualities wheat..... 1 00 @ 1 02 1/4

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-1900.	1900-01.
Liv. quotations.....	65 1/4 @ 65 1/4 d	65 1/4 @ 66 1/4 d
Freight rates.....	33 1/4 @ — s	38 1/4 @ 40 s
Local market.....	\$1 05 @ 1 07 1/4	\$1 05 @ 1 06 1/4

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

There is no improvement to note, either in the volume of business or in quotable rates. The movement is light, both outward and on local account. Shipments per China steamers have lately shown decided reductions, and the quantity going to Central and South American ports is not up to the average of previous years. Stocks are large enough to admit of a fairly active trade.

Superfine, lower grades.....	\$2 25 @ 2 50
Superfine, good to choice.....	2 00 @ 2 80
Country grades, extras.....	3 15 @ 3 40
Choice and extra choice.....	3 40 @ 3 65
Fancy brands, jobbing.....	3 60 @ 3 75
Oregon, Bakers' extra.....	2 90 @ 3 25
Washington, Bakers' extra.....	2 90 @ 3 40

## BARLEY.

Market has been quiet most of the current week, and lack of firmness has been

a prominent feature, especially for other than most select qualities. Choice Chevalier continued in light supply, and there were no heavy offerings of desirable Brewing grades. Shippers operated slowly, however, in this center, although they may have done considerable purchasing through interior agents. Feed descriptions were in fully as heavy evidence as for some weeks past, and market for this class of offerings remained as unfavorable to the selling interest as previously noted.

Feed, No. 1 to choice.....	72 1/4 @ 75
Feed, fair to good.....	65 @ 70
Brewing, No. 1 to choice.....	80 @ 85
Chevalier, No. 1 to choice.....	97 1/4 @ 1 02 1/4
Chevalier, No. 2.....	85 @ 90
Chevalier, poor.....	70 @ 75

## OATS.

There has been no special activity in this cereal, the recent sharp advance in asking figures causing buyers to postpone purchasing as much as possible. There is no weakness to record, however, and no breaks of importance are anticipated in quotable values. Especially are choice to select qualities steadily held.

White Oats, fancy feed.....	1 35 @ 1 40
White, good to choice.....	1 25 @ 1 30
White, poor to fair.....	1 15 @ 1 25 1/4
Gray, common to choice.....	1 15 @ 1 25
Milling.....	1 30 @ 1 37 1/4
Surprise, good to choice.....	1 30 @ 1 45
Black Russian.....	1 10 @ 1 25
Red.....	1 12 1/4 @ 1 30

## CORN.

Stocks of domestic of all descriptions are of such insignificant volume at present that little more than nominal quotations for the same are possible. Supplies are mainly Eastern and are mostly in the hands of millers and small dealers, with business largely of a retail character.

Large White, good to choice.....	1 22 1/4 @ 1 25
Large Yellow.....	1 20 @ 1 22 1/4
Small Yellow.....	1 50 @ —
Eastern, in bulk (carload lots).....	1 15 @ 1 17 1/4

## RYE.

Shippers are taking moderate quantities of this cereal, but only at low figures. Local demand is light.

Good to choice, new.....	87 1/4 @ 90
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## BUCKWHEAT.

Market continues bare of stock and values are necessarily poorly defined. Offerings of desirable quality could be placed to very good advantage.

Good to choice.....	1 65 @ 2 00
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## BEANS.

No very large quantities of new crop beans have been thus far received, to the disappointment of wholesale dealers and jobbers, who had been looking for more liberal arrivals by this date and an easier market. Growers are not rushing their beans to sale, however, being satisfied that such action would necessitate the acceptance of comparatively low figures. Very few new crop Small White and Pea beans have come forward, and values for the same are not yet clearly established.

Pea, fair to good, 100 lbs.....	3 75 @ 4 00
Small White, good to choice.....	3 75 @ 4 00
Lady Washington.....	2 60 @ 2 75
Pinks.....	2 60 @ 2 75
Bayos, good to choice.....	2 65 @ 2 75
Reds.....	3 00 @ 3 25
Limas, good to choice.....	5 15 @ 5 25
Black-eye Beans.....	2 75 @ 3 00
Horse Beans.....	1 75 @ 2 25
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 75

Recent advices by mail from New York give the following report of the bean market, prices quoted being per 60-lb. bushel:

There has been a quiet, steady trade in State Marrow and the market for choice stock has ruled fairly firm on the basis of \$2.15; some holders have tried to get a little more, but have not had much success. Only a few Medium here and jobbing sales of these have been at \$1.80 @ 1.82 1/2, in rare instances \$1.85 for fancy quality. The call for Pea has been light all the week, and with advices of a little new stock to get here next week, and offerings of considerable lots for prompt shipment, the market has shown some weakness; for a few days past the best quality have jobbed at \$2.05, and it looks as if round lots could be bought for less. Export orders for Red Kidney have not been large, but some sales to Southern trade have helped to reduce stock and values have advanced fully 5c.; reported sales at \$1.85 @ 1.87 1/2 generally, but a few have been placed at \$1.90. White Kidney not plentiful and steady. Yellow Eye slow. Turtle Soup have sold up to \$1.65, and most of the stock is now held higher speculatively. California Lima a shade higher and quiet at \$3.52 1/2 @ 3.55. Quite a good many foreign beans have been sold to go out of town, and stocks have been much reduced. Supplies of green and Scotch peas have been light and prices have ruled firm in consequence.

## DRIED PEAS.

Little doing in this line. Quotations noted are based on the bids of wholesale operators, with producers as a rule holding out for higher prices. The crop is light.

Green Peas, California.....	2 00 @ —
Niles Peas.....	1 75 @ —

## WOOL.

There are no indications of life in the wool trade, either in Eastern manufacturing centers or in the local market. Although dullness prevails, there is no noteworthy disposition manifested on the part of holders to cut rates to effect sales. Quotations are continued without change. Some owners do not desire to sell at these figures.

## SPRING.

Humboldt and Mendocino.....	16 @ 18
Northern, free.....	14 @ 16
Northern, defective.....	11 @ 13
Middle Counties, free.....	14 @ 16
Middle Counties, defective.....	11 @ 13
Southern Mountain, 12 mos.....	8 @ 10
Southern Mountain, free, 7 mos.....	9 @ 11
Southern Mountain, defective, 7 mos.....	8 @ 10
Oregon Valley, fine.....	17 @ 19
Oregon Valley, coarse to medium.....	16 @ 17
Eastern Oregon, choice.....	15 @ 16
Eastern Oregon, fair to good.....	11 @ 14
Nevada, as to condition.....	14 @ 16

## FALL.

San Joaquin.....	7 1/4 @ 10
San Joaquin Lambs.....	8 @ 9

## HOPS.

New hops are arriving very slowly, less than 400 bales having been received since the 1st inst., as against 1600 bales for corresponding time in 1899. This is partly accounted for by decreased yield, but is mainly due to growers anticipating a more favorable market to unload than exists at present. The conditions on the Atlantic side and in Europe warrant the belief that there will be a fairly active shipping demand for best qualities.

Good to choice, 1900 crop.....	11 @ 14
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The following information on the hop market is published by a New York authority under recent date:

Nearly all the stock in this week has been 1899 hops from the Pacific coast; the remaining lots out there are in dealers' hands, and they will be coming forward during the next month. The local market has remained much the same as of late, but with only a small volume of business. A few early seedlings have arrived and sold at 16 1/2c. Loose samples of the late crop, of which a few have come in, show better quality than last year. For the 1899 hops full former prices are asked, but there is nothing at present to indicate further improvement. Most of the remaining lots will seem inferior in comparison with this year's crop, and holders are selling at current rates when opportunity offers. Weather conditions have been favorable for picking hops in this State, and harvesting is now well under way in all sections. About all of the seedlings are in the drying houses; some Humphreys have been bought at 15 @ 16c. Very little has been done in the way of the sales of the late hops. So far as we can hear, the crop is coming down rather better than was expected, and some estimates of the yield are 65,000 to 70,000 bales. On the Pacific coast the weather keeps good, and the quality of the hops promises to be fine. Cables from Europe this week have been unchanged, but it is stated that the very best of weather must be had until the end of picking to reach a yield of 400,000 cwt. in England. Last year the English crop was 631,000 cwt.

## HAY AND STRAW.

Values for good to choice hay continue to be well maintained at the quoted range, despite quite liberal receipts. Much of the best hay arriving, however, is coming forward under contract. Common grades do not sell readily, nor is the market firm for such stock. Volunteer hay is especially difficult to dispose of satisfactorily this season.

Wheat.....	8 00 @ 12 00
Wheat and Oat.....	8 00 @ 11 00
Oat.....	7 00 @ 10 00
Barley.....	5 50 @ 8 50
Volunteer.....	4 50 @ 6 00
Alfalfa.....	6 00 @ 7 50
Stock.....	5 00 @ 6 50
Compressed.....	8 00 @ 12 00
Straw, 3/4 bale.....	25 @ 37 1/4

## MILLSTUFFS.

Bran and Middlings were not in heavy stock and market inclined in favor of sellers. Rolled Barley market lacked firmness. Milled Corn was very steadily held.

Bran, 3/4 ton.....	14 50 @ 15 50
Middlings.....	17 50 @ 20 00
Shorts Oregon.....	14 50 @ 16 50
Barley, Rolled.....	15 50 @ 16 00
Cornmeal.....	26 00 @ —
Cracked Corn.....	27 00 @ —

## SEEDS.

Mustard Seed market shows a decidedly strong tone, with little of any kind offer-

ing, and no prospects of supplies showing material increase this season. In other seeds quoted herewith, business is of a light order and at generally unchanged values.

Mustard, Trieste.....	3 50 @ 3 75
Mustard, Yellow.....	4 50 @ 4 75
Flax.....	2 00 @ 2 50
Canary.....	3 1/4 @ 4
Rape.....	2 @ 3
Hemp.....	3 1/4 @ 4

## BAGS AND BAGGING.

Not much doing in this department, as is ordinarily the case at this time of year. In the entire list of quotable rates there are no changes to record.

Calcutta Grain Bags, buyer June-July.....	— @ —
Calcutta Grain Bags, spot.....	5 1/2 @ —
San Francisco Grain Bags, 22x36, spot.....	5 1/2 @ 5 1/2
State Prison Bags in lots of 2000, 3/4 100.....	5 65 @ —
Wool Sacks, 4 lbs.....	— @ 32 1/2
Wool Sacks, 3 1/2 lbs.....	— @ 28 1/2
Fleece Twine.....	7 1/2 @ —
Gunnies.....	— @ 12 1/2
Bean Bags.....	4 1/2 @ 5 1/4
Fruit Sacks, cotton.....	6 1/4 @ 7 1/4

## HIDES, PELTS AND TALLOW.

Hides and Pelts are moving slowly at quotably unchanged figures, with markets East relatively lower than here. Tallow is in fair shipping demand at current rates.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	9	8
Medium Steers, 48 to 56 lbs.....	8 1/2	7 1/2
Light Steers, under 48 lbs.....	8	7
Heavy Cow Hides, over 50 lbs.....	8 1/2	7 1/2
Light Cow Hides, under 50 lbs.....	8	7
Wet Salted Kip.....	8	7
Wet Salted Veal.....	8	7
Wet Salted Calf.....	8 1/2	7 1/2
Dry Hides.....	15	12
Dry Kip and Veal, 11 to 16 lbs.....	15	12
Dry Calf, under 4 lbs.....	15	12
Salted Horse Hides, large.....	2 00 @ —	—
Salted Horse Hides, medium.....	1 50 @ —	—
Salted Horse Hides, small.....	1 00 @ —	—
Dry Horse Hides, large.....	1 50 @ —	—
Dry Horse Hides, small.....	75 @ 1 00	—
Dry Colts' Hides.....	50 @ —	—
Pelts, long wool, 3/4 skin.....	1 00 @ 1 25	—
Pelts, medium, 3/4 skin.....	70 @ 90	—
Pelts, short wool, 3/4 skin.....	35 @ 60	—
Pelts, shearing, 3/4 skin.....	30 @ 35	—
Deer Skins, best summer.....	27 1/2 @ 30	—
Deer Skins, good medium.....	20 @ 22 1/2	—
Deer Skins, thin winter.....	— @ 10	—
Elk Hides.....	10 @ 12	—
Tallow, good quality.....	4 @ —	—
Tallow, No. 2.....	3 @ 3 1/2	—
Goat Skins, perfect.....	30 @ 37 1/2	—
Goat Skins, damaged.....	10 @ 20	—
Kid Skins.....	5 @ 10	—

## HONEY.

Market is lightly stocked with all descriptions, and more especially with high-grade white honey. There is a good demand at prevailing values.

Extracted, White Liquid.....	7 1/4 @ 8
Extracted, Light Amber.....	6 1/2 @ 7 1/4
Extracted, Amber.....	5 1/4 @ 6 1/4
White Comb, 1 lb frames.....	13 @ 14
Amber Comb.....	11 1/2 @ 12 1/4
Dark Comb.....	8 @ 9

## BEEFWAX.

Receipts are light and market is firm. More than is offering could be readily sold at rates quoted.

Good to choice, light, 3/4 lb.....	26 @ 28
Dark.....	24 @ 26

## LIVE STOCK AND MEATS.

Beef and Mutton brought practically same prices as preceding week, demand and supplies about balancing. Hog market was in fairly good shape, demand being better, and, although not quotably higher, materially easier prices are not looked for soon.

Beef, first quality, dressed, net 3/4 lb.....	6 @ —
Beef, second quality.....	5 1/4 @ —
Beef, third quality.....	5 @ —
Mutton—ewes, 6 1/4 @ 7c; wethers.....	6 1/4 @ 7 1/4
Hogs, hard grain fed, medium.....	5 1/2 @ 5 1/2
Hogs, small, fat.....	5 1/2 @ 5 1/2
Hogs, large, hard.....	5 1/2 @ 5 1/2
Hogs, feeders.....	5 1/2 @ 5 1/2
Hogs, country dressed.....	6 1/4 @ 6 1/4
Veal, small, 3/4 lb.....	8 @ 10
Veal, large, 3/4 lb.....	8 @ —
Lamb, spring, 3/4 lb.....	8 @ 8 1/4

## POULTRY.

Extra large and fat fowls were in good request and were salable to advantage, but with this exception the market most of the week inclined in favor of buyers. There were excessive supplies of medium-sized young stock, a heavy proportion of recent arrivals being Fryers and Large Broilers.

Turkeys, live hens, 3/4 lb.....	11 @ 13
Turkeys, live gobblers, 3/4 lb.....	10 @ 11
Turkeys, Young, per lb.....	15 @ 16
Hens, California, 3/4 dozen.....	3 50 @ 5 00
Roosters, old.....	3 75 @ 4 25
Roosters, young (full-grown).....	3 50 @ 5 00
Fryers.....	3 00 @ 3 50



Broilers, large.....	3 00	@ 35
Broilers, small.....	2 00	@ 50
Ducks, old, per dozen.....	3 00	@ 40
Ducks, young, per dozen.....	3 50	@ 45
Geese, per pair.....	1 25	@ 1 50
Goslings, per pair.....	1 50	@ 1 75
Pigeons, old, per dozen.....	1 25	@ —
Pigeons, young.....	1 75	@ 2 00

## BUTTER.

Strictly select fresh butter is showing decreased receipt, and values for same have been slightly advanced. Other grades are in more than ample stock for all current requirements.

Creamery, extras, per lb.....	26	@ —
Creamery, firsts.....	24	@ 25
Creamery, seconds.....	22	@ 23
Dairy, select.....	23	@ —
Dairy, seconds.....	19	@ 21
Dairy, soft and weedy.....	—	@ —
Mixed store.....	16	@ 17
Creamery in tubs.....	20	@ 22
Pickled Roll.....	20	@ 21
Firkin, California, choice to select.....	20	@ 21
Firkin, common to fair.....	17	@ 18

## CHEESE.

The market is neither better nor worse, but is running along in about same groove as for some weeks past. Stocks of domestic product are of very fair volume for this date. Eastern cheddars and twins are in very light receipt.

California, fancy flat, new.....	10	@ —
California, good to choice.....	9	@ 9 1/2
California, fair to good.....	8 1/2	@ 9
California Cheddar.....	—	@ —
California, "Young Americas".....	9 1/2	@ 11

## EGGS.

The advanced figures established last week for fancy fresh drove considerable trade on to cold storage and Eastern eggs, causing slight accumulations of best qualities. There was, in consequence, less firmness, but a clean-up and recovery is likely to be experienced at an early day.

California, select, large, white and fresh.....	31	@ —
California, select, irregular color & size.....	24	@ 30
California, good to choice store.....	19	@ 22
Eastern, as to section and grading.....	18	@ 24
Eastern, cold storage.....	—	@ —

## VEGETABLES.

There was a fair demand for Onions, mostly for shipment, but there was no lack of offerings, and prices kept at practically same range as last quoted. The last China steamer took 1,200 crates for Manila. Tomatoes moved off better than preceding week. Beans, Egg Plant and Peppers were offered at generally easy figures.

Beans, String, per lb.....	2	@ 3
Beans, Wax, per lb.....	2	@ 3
Beans, Lima, per lb.....	2	@ 3
Cabbage, choice garden, per 100 lbs.....	1 00	@ 1 25
Cauliflower, per dozen.....	50	@ —
Cucumbers, Bay, per box.....	25	@ 40
Egg Plant, per box.....	30	@ 60
Garlic, per box.....	3	@ 3 1/2
Green Corn, per sack.....	75	@ 1 00
Green Corn, Alameda, per crate.....	1 00	@ 1 25
Onions, Yellow Danver, per cental.....	50	@ 65
Okra, Green, per box.....	30	@ 60
Peas, Sweet, garden, per lb.....	2	@ 3
Peppers, Green Chile, per box.....	30	@ 60
Peppers, Bell, per lb.....	35	@ 65
Pickle Cucumbers, No. 1, per cental.....	1 00	@ 1 25
Pickle Cucumbers, No. 2, per cental.....	50	@ 75
Squash, Summer, per large box.....	30	@ 40
Tomatoes, River, per large box.....	30	@ 50

## POTATOES.

Values for potatoes were kept very close to the range last quoted, but the shipping demand was less active, orders falling off from Texan and Eastern points, owing to supplies there being obtained nearer home, mainly from Colorado. The last China steamer took 1,500 crates for Manila. Sweet potatoes were in good supply and market easy.

Burbanks, River, per cental.....	45	@ 70
Burbanks, Salinas, per cental.....	85	@ 1 05
Sweet Potatoes, Yellow, per cental.....	75	@ 1 50

## The Fruit Market.

## FRESH FRUITS.

As is to be expected at this date, mid-Summer fruits are disappearing from market, and will soon be wholly out, barring cold storage holdings. Apples and Grapes now make the leading display. The range of values for Apples continues wide, and the difference in qualities of offerings is fully as great as the difference in prices. Apples of high grade are not in excessive supply and are not likely to be at any time during the season, but of poor stock there is more coming forward than custom can be readily found for at low figures. Asking prices for Table Grapes stiffened materially after the rain of previous week, but market has since developed more ease, the damage to crop proving lighter than anticipated. Wine Grapes were in limited receipt and in a small way brought fairly good figures. Pears were in decreased supply, with Bartlett's nearly out; market was firm for choice. Peaches of choice to select quality met with very fair custom and brought as a rule full current rates. Plums and

Prunes, likewise Figs, were in rather light supply, and prices for desirable qualities were fully sustained at prevailing range. Melons were in good request most of the week at steady figures. There were not many Berries of any kind, neither was there demand for them active.

Apples, fancy, 4-tier box.....	1 00	@ 1 25
Apples, good to choice, per 50-lb box.....	80	@ 90
Apples, common to fair, per 50-lb box.....	25	@ 50
Apples, Crab, per box.....	—	@ —
Blackberries, per chest.....	—	@ —
Cantaloupes, per crate.....	50	@ 1 00
Figs, per 1-layer box.....	30	@ 60
Figs, per 2-layer box.....	50	@ 1 00
Grapes, Tokay, per box.....	40	@ 65
Grapes, Seedless Sultana, per crate.....	1 00	@ 1 25
Grapes, Isabella, per crate.....	50	@ 1 00
Grapes, Rose of Peru, per box.....	40	@ 65
Grapes, Black Hamburg, per box.....	40	@ 65
Grapes, Zinfandel, per ton.....	20 00	@ 26 00
Grapes, Muscat, per box.....	40	@ 75
Raspberries, per chest.....	5 00	@ 7 00
Nectarines, Red, per box.....	—	@ —
Nectarines, White, per box.....	—	@ —
Nutmeg Melons, per crate.....	30	@ 60
Plums, ordinary varieties, per box.....	25	@ 40
Plums, fancy, per box.....	50	@ 65
Prunes, per crate.....	35	@ 75
Peaches, per box.....	35	@ 60
Peaches, wrapped, per box.....	65	@ 80
Peaches, Cling, per ton.....	—	@ —
Peaches, Freestone, per ton.....	—	@ —
Pears, Bartlett, per box.....	75	@ 1 25
Pears, common kinds, per box.....	35	@ 75
Pomegranates, per small box.....	50	@ 75
Quinces, per box.....	30	@ 60
Strawberries, Longworth, per chest.....	5 00	@ 8 00
Strawberries, Large, per chest.....	3 00	@ 6 00
Whortleberries, per lb.....	4	@ 6
Watermelons, per 100.....	6 00	@ 18 00

## DRIED FRUITS.

There is considerable business reported in Prunes, both of the Association and outside stocks, on basis of values lately established, but beyond this the market for cured and evaporated fruits shows little life. Some assorted cars of fruit are moving outward, but the quantity is insignificant as compared with the ability and desire of handlers to fill orders. Apricots continue to be steadily held, with stocks mostly in second hands. Peaches are unchanged as regards general asking rates or quotable values, but to move them freely at present, concessions from existing quotations would have to be granted buyers. Pears are meeting with moderate attention, but only where the quality is choice to select can the market be said to display any firmness. Apples are moving slowly at current values, mostly on Government account, and the outlook is not encouraging for any brisk movement at full figures in the near future. Fig market showed a tolerably strong tone, but is not quotably higher. It is not quite certain that the quarantine against the Smyrna product will remain in force until it will be too late to fill orders on holiday account, but indications now are that such will be the case. In any event, it is altogether probable that all the good to choice Figs cured in California this season will be required and will meet with a profitable market.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	6 1/2	@ 7
Apricots, Royal, choice, in sacks, per lb.....	7	@ 7 1/2
Apricots, Royal, fancy.....	9	@ —
Apricots, Moorpark.....	10	@ 12 1/2
Apples, in 50-lb boxes, rings, pressed, fancy.....	5 1/2	@ 5 1/2
Apples, 50-lb boxes, rings, pressed, good to choice.....	4 1/2	@ 4 1/2
Figs, White, fancy pressed.....	6	@ 7
Nectarines, per lb.....	4	@ 6
Peaches, unpeeled, fancy.....	6 1/2	@ 7 1/2
Peaches, unpeeled, choice.....	5	@ 6
Peaches, peeled, in boxes.....	12	@ 15
Pears, unpeeled Bartlett's, halved, fancy.....	7 1/2	@ 8
Pears, halved, unpeeled Bartlett's.....	5 1/2	@ 6 1/2
Pears, quartered, unpeeled Bartlett's.....	5	@ 6
Plums, Black, pitted.....	4 1/2	@ 6
Plums, White and Red.....	6	@ 7
Prunes, Silver.....	4 1/2	@ 6

Prices for new crop Prunes, as named by the California Cured Fruit Association: Santa Clara, four sizes, 3c. per lb.; 40-50s, 7c.; 50-60s, 5 1/2c.; 60-70s, 3 1/2c.; 70-80s, 3 1/4c.; 80-90s, 2 1/2c.; 90-100s, 2 1/4c.; 100-120s, 2c., which is the uniform price for this grade; Sonomas, other than smallest, 1/2c. less; other districts, 1/4c. less, except for smallest; Ruby, 1/4c. premium.

## COMMON SUN-DRIED.

Apples, sliced.....	3	@ 3 1/2
Apples, quartered.....	3 1/2	@ 4 1/2
Figs, Black.....	2	@ 3
Figs, White.....	3	@ 3 1/2
Peaches, unpeeled.....	4 1/2	@ 5

Advices by recent mail from New York give the following report of the dried fruit market in the East:

The market for spot apples has remained unchanged. Evaporated apples have a light jobbing demand, and for high-grade fruit full prices are realized, but comparatively little stock of this quality and general sales from about 6c. down. Scarcely any attention given sun-dried apples, and chops and waste also quiet and nominal. There has been active trading in futures, buyers being stimulated by increased calls from abroad, and contracts have generally been on the basis of 4 1/2c. for prime evaporated, October and November delivery, 4 3/4c. for December delivery and 4 1/4c. for January delivery. A considerable quantity of Northwestern quar-

ters has been sold for November delivery at 4@4 1/4c., former for prime and latter figure for choice stock. Prime Southern quarters worth 3 1/2@4c. for September or October delivery, with choice quality quoted at 4@4 1/4c. Some interest in chops and waste for future delivery, and choice heavy-packed chops quoted at 1 1/4@1 1/2c. for October and November delivery, and waste about 1c. Southern peeled peaches, both Georgia and North Carolina, have had further sales at 8@9c. Cherries scarce and higher. Few raspberries available and holders ask extreme prices. Huckleberries have shown further improvement, with most holders asking more than quoted at the close. Blackberries in quite free supply and barely steady at 4 1/2@5c., sales generally at the latter figure. California fruits have shown no material change; apricots are held with confidence at full late prices, fancy occasionally above quotations.

Apricots, Cal., Moorpark, 1900.....	10	@ 14
Apricots, Cal., 1900, per lb.....	8	@ 9
Peaches, Cal., unpeeled, in bxs, per lb.....	7	@ 8
Peaches, Cal., unpeeled, in bags, per lb.....	6	@ 7 1/2
Prunes, Cal., per lb.....	4 1/2	@ 6 1/2

## RAISINS.

New crop Raisins are expected on market at an early day, and if weather had been favorable there would probably now be samples on exhibition. Association prices will likely be determined on the coming week. Bleached Sultanias, which had been offering outside of the Association for forward delivery at 7 1/2c., are not now obtainable under 8 1/2c. For Thompson's Seedless 9 1/2c. is the lowest figure named by non-Association packers.

## CITRUS FRUITS.

There was a fairly active demand for Lemons, but quotable prices were without improvement, the supply proving more than sufficient for current needs. Limes were in reduced supply, although prices remained unaltered.

Lemons—California, select, per box.....	2 75	@ 3 00
California, good to choice.....	1 75	@ 2 50
California, common to fair.....	1 00	@ 1 50
Limes—Mexican, per box.....	5 50	@ 6 00
California, small box.....	—	@ —

## NUTS.

Stocks of Almonds are too insignificant to admit of any noteworthy business. Market continues strong. The Walnut Growers' Association announced prices for the 1900 crop this week as follows: No. 1 softshell, 10c. per lb.; No. 2, 8c.; No. 1 hardshell, 9 1/2c.; No. 2, 7 1/2c. These figures are f. o. b. southern California points of production. Prices for San Francisco delivery, about 1/2c. higher.

California Almonds, shelled.....	25	@ 27
California Almonds, paper shell, per lb.....	13 1/2	@ 14
California Almonds, soft shell.....	12 1/2	@ 13
California Almonds, hard shell.....	9	@ 9 1/2
Walnuts, White, soft shell.....	9 1/2	@ 10 1/2
Walnuts, White, California, standard.....	8	@ 10
Chestnuts, California Italian.....	—	@ —
Peanuts, California, fair to prime.....	5	@ 6
Peanuts, Eastern, hand-picked.....	6	@ 6 1/2
Pine Nuts.....	5	@ 6

## WINE.

There is virtually no Wine offering at present from first hands except for forward delivery, and not much in this way. Quotable values for new wines remain to be determined, and this will likely continue to be the case for several months. Wine grapes are selling at a very wide range, as to variety, condition, quantity, location, etc., with market firm for desirable stock. The quotable range for dry wine grapes may be said to be \$16@26 per ton, although there are sales of poor grapes reported under inside figure and transfers of fancy qualities at an advance on extreme quotation named.

**Horse Owners! Use**  
GOMBAULT'S  
**Caustic Balsam**  
A Safe Speedy and Positive Cure  
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WOOL, GRAIN, FLOUR  
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Members of the San Francisco Produce Exchange.  
Personal attention given to sales and liberal advances made on consignments at low rates of interest.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, 1/4 sacks.....	60,639	1,129,642
Wheat, centals.....	33,210	1,021,575
Barley, centals.....	46,247	1,374,739
Oats, centals.....	25,349	248,705
Corn, centals.....	175	11,828
Rye, centals.....	1,457	55,010
Beans, sacks.....	2,420	29,225
Potatoes, sacks.....	32,379	312,791
Onions, sacks.....	4,715	49,619
Hay, tons.....	4,897	51,383
Wool, bales.....	836	9,195
Hops, bales.....	5	559

## EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, 1/4 sacks.....	28,524	562,300
Wheat, centals.....	25,257	944,190
Barley, centals.....	212,953	877,960
Oats, centals.....	39	22,539
Corn, centals.....	121	4,226
Beans, sacks.....	12,815	19,964
Hay, bales.....	—	233,621
Wool, pounds.....	83	72,264
Hops, pounds.....	108	794
Potatoes, packages.....	1,419	13,010

## California Dried Fruit at New York.

NEW YORK, Sept. 19.—Evaporated apples common, 3@4c.; prime wire tray, 4 1/2@5 1/4c.; choice, 5 1/2@6c.; fancy, 6@6 1/2c.  
California dried fruits.—Market is quiet, but steady at rates quoted.  
Prunes, 3 1/2@7 1/2c.  
Apricots, Royal, 11@14c.; Moorpark, 15@17c.  
Peaches, unpeeled, 6@9c.; peeled, 14@18c.

**PAINT!**  
TRADE MARK  
**INDURINE**  
MARK

**THE ORIGINAL COLD WATER PAINT.**  
Fireproof and Waterproof. Costs only a fraction of price of Oil Paint. Waterproof Indurine is designed for inside or outside use on plastered walls, wood or brick. Inside Indurine is for inside work only and works over old whitewash or kalsomine. White and colors.

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This is a practical, thorough and complete work based on what has been done: a record of solid facts.  
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**Garden and Field.**  
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**COE'S ECZEMA CURE** \$1 Large sample mailed free. Coe Chem. Co., Cleveland, O.





### SCENES AT CAPE NOME, ALASKA, AUGUST, 1900.

No. 1.—Anvil Creek (Showing Flat Ground and Lack of Dump). No. 2.—Toll Bridge and Ferry. No. 3.—Mining on the Beach. No. 4.—C. D. Lane's First Railway Train on the Way to Anvil. No. 5.—The Beach at Nome, From N. A. T. Wharf, Looking West. No. 6.—Street Scene in Nome. No. 7.—Beach Scene West of Nome, Aug. 5.

Trade-Marks



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BRANCHES: St. Paul, Kansas City, Omaha, Ft. Worth, San Francisco.

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is still in the lead. We have again secured our share of the premiums at the State Fair, with the hottest competition ever seen there. We were awarded 15 ribbons—4 firsts, 8 seconds, and 3 sweepstakes. This week we exhibit at the Oregon State Fair, and the two weeks following (Sept. 24-Oct. 6) at San Mateo. Any one interested in seeing a **PRIZE HERO** should call at our pens.

Our sales have been large and at present have but a few pigs left. Correspondence solicited.  
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Burns  
Bruises

Cramps  
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All Bowel  
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It is a sure, safe and quick remedy,

There's **ONLY ONE**

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Two sizes, 25c. and 50c.

Don't Rush Into Cities.

It has long been the belief of Mr. Stickney, the president of the Chicago Great Western Railroad, that the farm life of America has been needlessly somber, states his biographer in Ainslee's magazine. He is a very earnest advocate of a complete change in the methods of farm life. He is in favor of creating a little community where there are even a half dozen farmers. He would have these farmers come into a common community, not in any sense theoretically communal, but a community for cultivation, for mental advancement, for social progress, for the fostering of the finer and the jollier features of life. He advocates the union of these farmers into such a town or community, each one going out from his home in the morning to his field as a city laborer goes out to his work. The houses he would have built at some intersecting point, which would at all times leave the families of the farmers in immediate contact. Not only would there be a great increase in the satisfaction of living, but protection would be insured in the emergencies of sickness, fire and tramps. He would obliterate the isolation which separates the farmer from the world.

Yet on no point is he more strenuous in his writings than on the foolishness shown by intelligent men in flocking to the cities for employment in already overcrowded quarters, when the opportunities in the country are so large and tempting to the man of clear vision. Here is a quotation from an address which Mr. Stickney gave some time ago:

"To the dogs with the sentimental nonsense that the cramming process of the city schools and the advantages of city churches, which you seldom enter, 'are all that makes life living,' and that to remove to the country is to rob your children of these advantages. Let laboring men examine the pedigree of the successful business men, the distinguished lawyers, the leading physicians, the most eloquent clergymen, and almost without exception they are country born, reared and educated."

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General Agents, SHOOBERT-BEALE CO.,  
222 SANSOME ST., SAN FRANCISCO.

THE caper, familiar in caper sauce, and used also as a garnish for salads, is imported from Spain and France. Capers are grown in Italy, but none are imported from there into this country. Capers are sorted into four sizes, of which the smallest are known commercially as nonpareils, and the next larger as surfines. The next larger in French capers are capucines, and the largest capotes, while the next to the largest, and the largest of Spanish capers are known respectively as capotes No. 1 and No. 2. The smallest capers are the most desirable and bring the most money. French capers sell for more than Spanish. Capers are imported almost wholly in bulk in kegs of fifteen or sixteen gallons, and barrels of about forty gallons in brine or vinegar. A few capers are imported in glass, but they are mostly put up in this country. Capers grow on a bush.

In olden times the English had three meals a day, of which the chief meal was taken when the work of the day was finished. The first meal was at 9, dinner was about 3 o'clock, and supper was taken just before bedtime. The Normans dined at the old English breakfast time, or a little later, and supped at 7 p. m. In Tudor times the higher classes dined at 11 and supped at 5, but the merchants seldom took their meals before 12 and 6 o'clock. The chief meals, dinner and supper, were taken in the hall both by the old English and the Normans, for the parlor did not come into use until the reign of Elizabeth.

## Breeders' Directory.

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**HOLSTEINS**—Winners over Jerseys of EVERY butter contest at State Fairs for last six years. Aged, 4-yr., 3-yr. and 2-yr.-old classes, except 1st on 2-yr.-old in 1895. Last year every butter prize awarded won by my herd, except 2nd for 2-yr.-olds, 21 Jerseys and Durhams competing. F. H. Burke, 826 Market St., S. F.

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## THE VETERINARIAN.

Answers by Dr. Creely.

**SICK CALVES.**

TO THE EDITOR:—Some friends of mine keep a fairly large dairy near Redding, and, needless to say, have some valuable calves to rear. One of the ladies looks after them and is in great tribulation, having lost two of the best and one is now very sick. The symptoms are as follows: The calf has a slight cough and running at the nose, particularly in the morning; in the afternoon its nose is quite dry and hot. It drank fairly well in the beginning, gradually losing its appetite, and will eventually die in about ten days. Others recover, but are very poor and thin for a long time afterward. The one I saw was lying down panting badly, although in shade, with head out and ears back; the eyes appeared to be looking back and downward. Would Dr. Creely kindly give an opinion, and any cure would be very much appreciated. The calves are well fed—half sweet milk and half separated, with a little cooked flaxseed; the sick one in particular is allowed one teat. The owners milk fifty cows.—W. J. B. MARTIN, Redding.

Acetamide,  $\frac{1}{4}$  lb.; chlorate potash,  $\frac{1}{4}$  lb.; nitrate potash,  $\frac{1}{4}$  lb.; pulverized belladonna leaves, 1 oz. Mix with honey and give a teaspoonful three times a day.

**WARTS ON COW'S TEATS.**

TO THE EDITOR:—Will Dr. Creely please give a prescription for taking warts off the teats of a cow? I have a fine heifer with her first calf and do not want to sell her, though her teats are completely covered with fine, needle-like warts. This makes her tender about milking, and I am afraid will cause her to become a kicker.—T. W. MADELEY, New-castle.

Clip off the warts with curved scissors, after which apply once daily stick silver caustic.

E. J. CREELY, D. V. S.  
510 Golden Gate Ave., S. F.

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by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube is inflamed you have a running sound or imperfect hearing, and when it is entirely closed, Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

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Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. Established 1864. Send for Circular.

**The Prune Crop.**

SAN JOSE, Sept. 14.—The daily reports that come into the office of the Cured Fruit Association from the various prune-growing sections of the State are all to the same effect—that more than a quarter of the crop will run 100 and over in sizes and that the large sizes are scarce indeed. Owing to the cloudy weather and recent showers the drying has been slow and the fruit is not coming into the warehouses in half the quantities usual at this time of year. About 7,000,000 pounds have been received so far, of which 20% is of the large sizes and the great majority of the balance from 100 in size up. There is still considerable fruit on the trees and large quantities on the ground. A considerable percentage of the crop will go to waste owing to lack of labor for picking.

As showing how important is the children's department in a modern public library, it has been estimated that of the 1,750,000 books taken from the library at Chicago during the last year 500,000 were read by children under fourteen years of age. Many people never do so much reading after they grow up as they do during the years between twelve and eighteen.

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Box 288 Ridgeville, Indiana, U. S. A.

## PAGE

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our prices now are a strong inducement. Write us.

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## Pacific Steel Handy Wagon.

**WHEELS**.....28 and 34 inches high.  
**TIRES**.....4 and 5 in. wide,  $\frac{1}{4}$  in. thick.  
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Since every up-to-date dairyman and owner of cows uses a milk tester, not only for his herd record, but also to assist him in his breeding operations, he should use one which is easy to operate, which is reliable and which will last indefinitely. This one, as its name indicates, is made entirely of cast iron, bronze and steel. Tin is discarded entirely as being too light and rusting out too quickly from contact with the acid in event of breakage, &c. We make these in sizes holding 4, 6, 8, 1 and 12 bottles. All the gears are cut from phosphor bronze and are strong, noiseless and easy to turn. It is high-gear; one turn of the handle makes many revolutions of the test. Remember—there is no tin used in constructing this test. Our shops repair all kinds of separators and dairy and creamery machinery promptly. Send for free catalogue No. 70

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## The only roofing without a fault

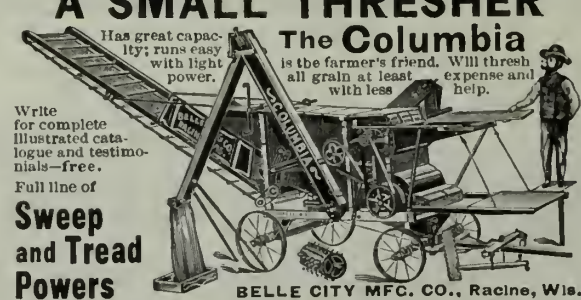
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—the faded out, yellow kind that are not doing well may be instantly revived by the application of a dressing of

## NITRATE OF SODA.

It acts at once because it is very soluble. This makes it instantly available as plant food; 100 to 200 lbs. per acre is sufficient for most crops.

This is the most concentrated fertilizer on the market.

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FOR TOWN WATER WORKS.

**Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes.**  
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Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with Asphaltum.

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Lithographed Carpet, Rug and Drapery Catalogue, and our Clothing Catalogue with large samples at-tached, are also free. Expressage paid on Clothing; Freight paid on Carpet.

Which book shall we send? Address this way:  
**JULIUS HINES & SON**  
Department 43 BALTIMORE, MD.

### Decision on Killing Quail.

Justice James of Los Angeles has ad-judged Marco Bollantine guilty of vi-olating the county game ordinance in killing three valley quail at Verdugo. Bollantine was charged with killing the quail near the Verdugo ranch Aug. 26th. The killing was admitted by the defense, but justification was claimed on the ground that the quail were de-structive of growing crops of grapes. About five acres of the 1000-acre Ver-dugo ranch is planted in grapes. It was shown by the evidence that the quail were not in the vineyard and that their craws contained no grape seeds. Bollantine was caught in the act of shooting the quail.

In the course of his decision Justice James says: "To hold that in justifica-tion for an act of killing game during the closed season all the defendant would be required to show was that he had a fear that his property would be injured in some way by the game, would suspend almost completely the opera-tion of the ordinance and statute. I think that before such a plea should be

sustained it should be clearly shown that the game killed either in fact did destroy the crops and property, or that it had a well known propensity for so doing. But if a mere suspicion is to be held sufficient for the person killing the game to act upon, it is safe to say that there would be innumerable cases in which the defense would be counter-feited and not in good faith."

The justice concluded his decision by declaring Bollantine guilty of a viola-tion of the game ordinance. A viola-tion of any section of the game ordi-nance is deemed a misdemeanor, and any one found guilty may be fined from \$20 to \$500, or be imprisoned in the county jail from 10 to 150 days.

### To Choke Off Mosquitoes.

To THE EDITOR:—In answer to Con-stant Reader, Alameda, about mosqui-toes, I would say that if he puts a pinch of permanganate of potash in any hole which contains mosquitoes he will clean them out quick. I read in an English paper that a pound will kill every mos-quito for a mile square if just a little was scattered here and there in the swamp. W. J. B. MARTIN.

### List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
PIONEER PATENT SOLICITORS  
FOR PACIFIC COAST.

FOR WEEK ENDING SEPTEMBER 4, 1900.

- 657,377.—GRAIN CLEANER—J. P. Adams, Garfield, Wash.
- 657,080.—FUNNEL—W. C. Belden, Ioa-mosa, Cal.
- 657,190.—GAS GENERATOR—W. M. Crow, Lakeview, Cal.
- 657,191.—GRATER—E. Crupe, S. F.
- 657,192.—WATER ELEVATOR—T. J. Demorest, Garfield, Wash.
- 657,099.—RAILWAY SWITCH—G. H. Fair-child, S. F.
- 657,195.—ELEVATOR CUT-OFF—G. A. & A. G. Guenther, Orange, Cal.
- 657,105.—PENCIL TRAY—Edith L. Hamil-ton, Fresno, Cal.
- 657,106.—DRAWING BEER—L. H. Handy, S. F.
- 657,197.—LUNCH BOX—L. J. Hills, Fruit-vale, Cal.
- 657,219.—LUBRICATOR—B. Jackson, S. F.
- 657,287.—BALING PRESS—C. J. Johnson, Paso Robles, Cal.
- 657,423.—LAMP BRACKET—B. F. Kent, Eugene, Or.
- 657,363.—SPRINKLER—J. W. Sanderson, Oakland, Cal.
- 657,460.—FISH TRAP—J. O. Sharpless, Fairhaven, Wash.
- 657,206.—FIBER FORMING MACHINE—C. M. & O. C. Terrell, Grant's Pass, Or.
- 657,258.—HYDROCARBON BURNER—S. M. Trapp, Tacoma, Wash.
- 657,259.—HARVESTER REELS—S. M. Warder, Winters, Cal.
- 657,376.—GAS GENERATOR—G. Woods, Bakersfield, Cal.
- 657,150.—GAS GENERATOR—Wonnald & Ames, Spokane, Wash.

### Notices of Recent Patents.

Among the patents recently obtained through Dewey, Strong & Co.'s SCIEN-TIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of spe-cial mention:

BALING PRESSES.—No. 656,767. Aug. 28, 1900. Charles Dodge, Davisville, Cal. This invention relates to improvements in baling presses of that class in which the follower moves in a vertically disposed box or chamber, and in which a door has its lower edge hinged near the bottom so that the top may drop outwardly to re-ceive the charge of material, said door be-ing closed when the press chamber is suf-ficiently filled and previous to raising the follower to compress the bale. The in-vention consists of a combination of levers operating similarly to what are known as carriage joints and connections, and by these levers the door is opened and closed. The levers are in turn connected by chains with the operating sweep which may be driven by horse or other power.

BOX PRINTING MACHINE.—No. 656,383. Aug. 21, 1900. John F. Ames, Port-land, Or. This invention is designed to pro-vide for the printing of the boards which are employed for making wooden boxes. These boards are not very carefully sawed and therefore vary in thickness, and it is necessary to so mount the printing rollers

that they will adjust themselves to the varying thicknesses of material. The roller carrying the type of printing surface and the second roller have the ends journaled and turnable in independent and elastic bearings so that they are mov-able to and from each other, and one end is capable of a vertical hold independent of the other to compensate for different thicknesses of the ends of the board caused by irregularities in sawing. Means are devised for intermittently passing the boards to be printed between the rollers, and means for transmitting power to rotate the rollers in unison. By an ar-rangement of driving and idler pulleys and a rope or belt passing around them the automatic adjustment of the rollers is per-mitted without deleterious effect upon the belt.

HARNESS SUPPORT.—No. 656,405. Aug. 21, 1900. William R. Hewitt, San Francisco, Cal. This invention is designed for suspending harnesses in a spread condition as they are employed in fire, police departments and like places where it is necessary for the horses to be attached to the apparatus and in readiness to start in the shortest space of time after an alarm. These harnesses are usually spread out and suspended by ropes or equivalent attachments, but the devices by which they are thus held are not of permanent adjustment and are continually in need of repairs. In the invention is em-ployed a series of telescoping tubes, with springs in the tubes whereby each of the set is independently spring supported. Devices are employed by which the springs may be compressed and shortened when a weight is hung from the device, and are extended and act to shorten and telescope the tube when relieved of the weight so that the tubes are carried to the upper part of the room and out of reach as soon as relieved of the harness. In con-junction with the springs may also be used pistons movable with the tubes so as to compress the air and to regulate the movement of the tubes when they are re-lieved of the weight of the harness so that they do not fly up too suddenly.

### An American Triumph.

The following letter has been received at West Chester, Pa., by Mr. P. M. Sharples, manufacturer of the Sharples Cream Separators:

U. S. DEPARTMENT OF AGRICULTURE.  
BUREAU OF ANIMAL INDUSTRY. DAIRY DIVISION.  
WASHINGTON, D. C., Aug. 27, 1900.  
Mr. P. M. SHARPLES, West Chester, Penna.  
DEAR SIR:—It gives me pleasure to inform you that we have just received from Major Henry E. Alvord, Chief of this Division, and now in charge of the U. S. animal industry exhibit at the Paris Exposition, a partial report of awards on dairy machinery and products in the U. S. Collective exhibit, which states that the Cream Separators sent by you have been awarded the gold medal.  
Very respectfully,  
R. A. PEARSON,  
Acting Chief of this Division.

WANTED.—BY A MARRIED MAN, A POSI-tion to take charge of a fruit ranch, or will rent. Is thoroughly competent, with the best of references. Apply F. FOREMAN, Diamond Spring, El Dorado Co., Cal.

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### F. C. LUSK,

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.

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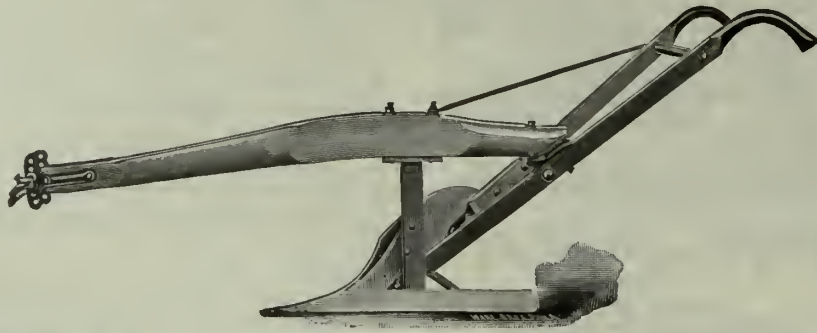
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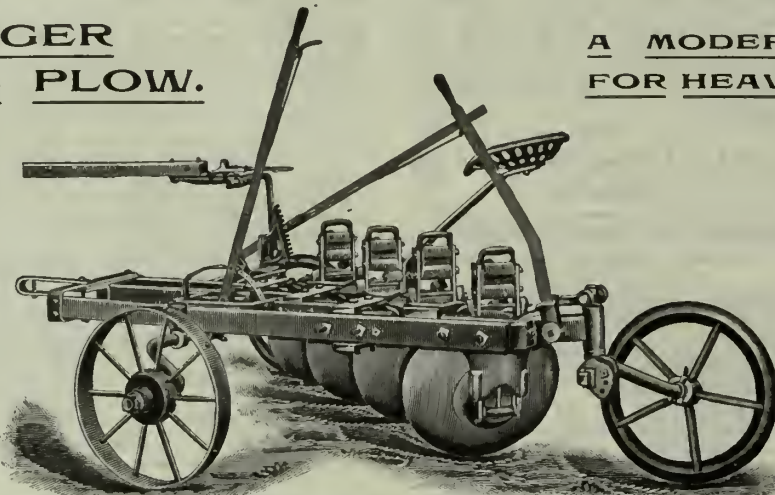
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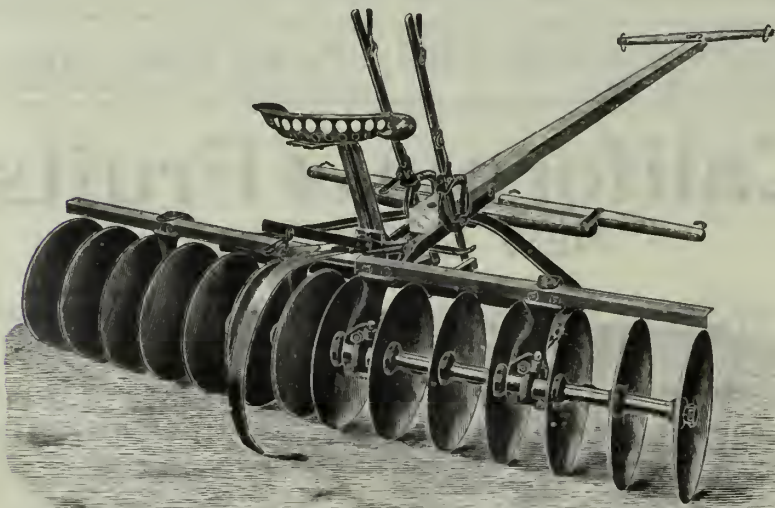
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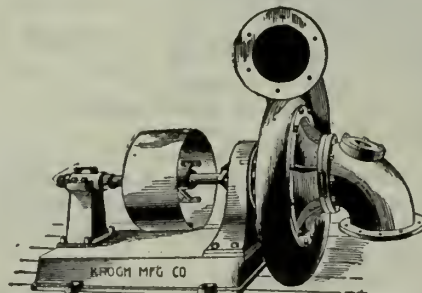
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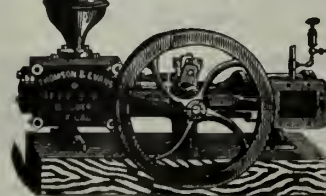
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 13.

SAN FRANCISCO, SATURDAY, SEPTEMBER 29, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

### Humboldt Stock Farm, Lovelocks, Nevada.

At various times during the last five years has been

locks, Humboldt county, Nevada, on the line of the Central Pacific Railroad, is owned and occupied by Mr. Joseph Marzen. In its original state it was

the most noted strains of blood, the Cruickshank predominating. During all these years this herd of Shorthorns has been awarded over 100 first pre-



BIRD, PHOTO.

Shorthorn—Norubee Duke, 2 Years Old.

Hereford—Artisan, 2 Years Old.

Shorthorn—Sharon Victor 6th, 3 Years Old.

Shorthorn—Waterfall 2nd, 4 Years Old.



BIRD, PHOTO.

Hereford—Artisan, 2 Years Old.

Shorthorn—Sharon Victor 6th, 3 Years Old.

### Prize-Winning Cattle Owned by Mr. Joseph Marzen, Humboldt Stock Farm, Lovelocks, Nevada.

shown the advantages of Nevada for breeding stock. It has been demonstrated that Nevada, with her rich soil and favored climate, offers special inducements and facilities for high development of all kinds of livestock. The long days of mellowing sun conduce to the perfection of grains and grasses, and the products are right in the elements of flesh-forming food, making them valuable for the feeding of horses and cattle.

The Humboldt Stock Farm, 2 miles west from Love-

wild lands and alluvial bottoms, and before its occupation by Americans was a wild waste or rabbit-run; but, by a complete system of irrigation, it has been made as productive as the valley of the Nile. Twenty years ago Mr. Marzen commenced breeding Shorthorn cattle, and has continued in that business with signal success up to the present time. There is in this tract of land 3500 acres, 1500 acres of which are well planted in alfalfa. At the present time his herd consists of 300 head of registered Shorthorns from

miums, including gold and silver medals. Among the awards given to this herd were exhibit medals at succeeding Nevada Fairs, as follows:

1885, Nevada Agricultural Society, 1 silver medal; 1888, Nev. Ag. Society, 4 silver medals; 1889, Nev. Ag. Society, 3 silver medals; 1891, Nev. Ag. Society, 5 silver medals; 1899, Nev. Ag. Society, 3 silver medals; 1889, Nev. Ag. Society, 2 gold medals; 1891, Nev. Ag. Society, 2 gold medals; 1899, Nev. Ag. So-

(Continued on page 198.)



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E. J. WICKSON.....Horticultural Editor.

San Francisco, September 29, 1900.

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## The Week.

The season is closing in good shape and affording full opportunity to secure late crops in the best condition. The heat, though a little uncomfortable, is just what is needed to compensate for the shortening of the days in the matter of fruit curing. A few days more will see the raisins and prunes out of danger, and one can then settle down to rain dreams without worrying. The distressing and destructive forest fires have covered large areas and have invaded farms and towns in some districts. It is said that one of the worst of these is traceable to the carelessness of a small farmer who began his brush burning too early in the season. There should be some way to impress people more deeply with the criminality and the inhumanity of careless handling of fire during the dry season. It is hard to reach people who do not read and do not think, and it is a wonder they have not burned up the world before this. It may take a fire patrol to watch and read the riot act to every man caught with an open fire, and if supervisors should arrange even for that it would probably cost but an infinitesimal fraction of the loss incurred this year.

The markets are active and interesting as a rule. Wheat has been borne down rather hard, but the rates have not changed. Barley has rather a better feeling, but is not quotably higher. Oats are firm at old figures and the Government is buying heavily. Corn is scarce and high. Hay has advanced 50 cents per ton for stable grades. Heavy shipments of hay are going to the Orient. One transport took 9800 bales. All feedstuffs are firm and bran has advanced. Beef and mutton are unchanged while veal and lamb are slightly easier; hogs shade off, but are firm at the decline as packers are now at it again. Butter and eggs are higher and cheese is firm. There is an excess of Eastern poultry, the demand is slack and the market in bad shape. Potatoes move freely at old prices and onions are doing fairly without change. Bean receipts are larger and large white beans are easier; small white and pea beans are held high as the crop appears to be light. Prunes and raisins are going well and combination prices seem to be holding all right. Hops are active and some are being held for advance. Mustard seed is reported all sold at good figures. Wool is asleep.

The destruction of street and roadside trees by the electric light vandals is becoming a sharp issue in many of our towns and in the rural districts as well. Some way must be found to prevent it. The trees must have the space they need for handsome growth, and if there is not room enough left in the

firmament above for the wires, they must go underground. The Niles Herald says that in Decoto all of the magnificent trees have been sacrificed and many on the Mission road have not been spared by the ax-man. A united protest should be made and every property owner should see that no tree in front of his property is touched. Forbid the workmen and secure an injunction if necessary. The Herald fitly calls attention to the fact that the Legislature has declared in favor of roadside trees and has made it compulsory upon the Board of Supervisors to pay a bounty for every tree grown for four years upon the public highways. If this destruction can not be stopped otherwise, the next Legislature should be appealed to to protect State property.

## At the South.

Following the line of observation in southern California, which was noted in our last issue, brought us almost to the Mexican line and gave views of several localities in San Diego county. In many of these places it is wonderful what has been accomplished in water development and what wide duty has been secured from the water gained. Even in the most trying situations some have made to us the somewhat trite claim that the drouth is after all to inure to the benefit of the country because it has taught so much about finding and using water. No doubt this is true, but it takes some heroism on the part of the sufferer to advance it where the losses and deprivations have been as great as in some of the places we visited.

We found in San Diego county the antithesis of our observation in the small artesian well region of Orange county. There, as noted last week, many people have fled the district with a great lake of water a few feet below them because the water would not flow out on the surface as it did before the drouth. In southern San Diego county the people have stood their ground and saved their trees, though the ground yielded but small returns per well, and that had to be pumped from scores of feet in many cases. In the listless artesian district there is oppressive silence in the night watches; on the dry mesas of San Diego there is the incessant coughing of the gas engines all the night long as they force the pumps to draw the water from the unwilling gravel below. It is indeed marvelous what has been accomplished by courageous effort and proper investment for water development, and unquestionably the results will be of incalculable advantage in future progress of the State.

But, though this is true, there have been great losses and hardships in some parts and in some cases. Plantings have been abandoned in places where the water has failed because the owners had neither resources nor resolution for the trying time. In some places, of course, neither resource nor resolution would have availed anything, because the situation was hopelessly dry and the investment was made without proper inquiry into the chances of the future. We saw many fruit plantings which certainly should not have been made; they were the offspring of the boom and the land dealers. They were of that form of gambling which gives no chance of gaining. The outcome is abandonment, and one sees the vestiges of industry and investment which would have brought competence and comfort if better placed. This distressing course of affairs has cost the southern counties something of a loss in population and in good name, and is to be regretted, not only because of individual distress, but because the country is blamed rather than the human folly which occasioned it. It is not likely that similar errors will be repeated, and in this sense also the drouth years will prove in the long run a blessing in disguise. There cannot be success unless we learn to use land for what it is adapted and scout the fairy tales of interested boomers of all kinds.

We saw at various places in the south what can also be seen in other parts of the State, to wit: the assurance that all current statistical showings of coming fruit crops on the basis of acreage not yet in bearing are likely to mislead. There are many thousands of trees of all kinds which have been enrolled among the plantings which will never come into bearing. Many of them have already passed through the fire, and many more are ticketed for that route.

Here, too, the chief cause is failure to discern lack of adaptation in the environment to the product contemplated. This could hardly have been avoided in establishing any new line of production in a large way, but the aggregate could certainly have been reduced by the use of ordinary knowledge, if appeal had been made to it. This experience, severe as it is in many individuals, is one of the sureties against overproduction which some fear. There is little need to be appalled by a prospect of a vast and sudden increase in the fruit products on the basis of new trees coming into bearing in great volume. There will be decrease enough to hold the product to steady and manageable advancement and to warrant further plantings of what is found to be good and profitable in the places where it is found thus to be. Our fruit plantings can now be more wisely made than ever, and there is far less danger than ever before in making investments.

We were everywhere impressed at the south with the progress Californians are making in the improvement of agricultural practice under our peculiar conditions of soil and atmosphere. This is clearly resulting from fuller understanding of the nature of these conditions as secured by scientific investigation and common observation. This is strikingly true in horticultural lines, but not alone in them. It is apparent in field crops, in animal industries and in other directions. The efficacy of deep culture is now being recognized as the proper foundation for the frequent, shallow cultivation which we have been too apt to consider in itself sufficient for the needs of plants in this climate. Depth of culture as related to the practice of irrigation is now one of the chief topics of interest in southern California. The importance of getting the water deeper in the soil is readily recognized and ways to do it are earnestly discussed. People are thinking of subsoil plows more than fine mulch makers. The latter we have in perfection, and it must be admitted that in times of scant water, at least, they are illusive. Irrigation hardpan has risen to a grievous importance beyond all past recognition. It is being clearly seen that the best way to save water in many soils is to lose it as deeply as possible and in such soils it can only be thus lost by deep opening of the surface and by deep stirring or breaking of the subsoil. We saw striking instances of the superiority of deep watering at long intervals when compared with frequent shallow wetting. This principle has been long preached and yet the results of practice are so striking that many are disposed to think that a new principle has been brought to light.

While this is true where one has a soil of good depth and adequate retentiveness one finds on the uplands back of San Diego conditions of soil which resent deep work and recourse to the soil-reservoir for water storage. There are large areas of land set to lemons, which are so shallow and so rebellious that quite different policies must prevail with them. The most careful work has to be done to supply enough moisture and yet not too much, for excess brings distress to the roots in their water-tight apartments. Fertilization also has to be most carefully adjusted in small and frequent doses. It seems to be a case of spoon-fed trees, and when the method is just right rich foliage and ample fruiting is secured. The climate is so fine and safe for lemons that the effort seems warranted and the later results from the methods of culture now prevailing will be watched for with much interest. The soil conditions are quite at variance with prescribed characters, and if permanent success can be secured we shall win credit for Californians in complex and exact cultural methods. The contrast between this and the deep working previously mentioned is very striking and is illustrative of the adversity of California conditions and the ingenuity of our people in meeting them.

We spent much time in the lemon districts of San Diego county, which are much the greatest in the State. Naturally, the pruning of the lemon is a subject of constant thought and discussion. There is arising a very rational and satisfactory handling of the tree, which suits the soil and situation and has original features. We have in this issue an essay on lemon pruning by Mr. R. C. Allen of Bonita in the Chula Vista region, to which we call particular attention. The excellent paper of Mr. Leffingwell in last week's issue should be read in connection with



Mr. Allen's. The writers are located in different counties and work under somewhat different conditions, and the two taken together will give the distant reader a very good idea of the lines along which advanced practice in pruning the lemon is moving. We shall take early opportunity to present some engravings illustrating lemon pruning, and shall then recur to the subject.

A series of twelve Farmers' Institutes which began the last week in August and filled four weeks in four southern counties was very satisfactory and successful throughout. The papers of the chief practical value are now appearing in our columns. The attendance was seldom below 200 and usually nearer 300, and the keenest interest was manifested. The meetings generally adopted resolutions approving this extension work of the University of California and asking the Legislature to provide for its increase by adequate appropriation, as is done in other States.

THE Los Angeles Chamber of Commerce reports receipt of many letters from European merchants asking for California fruits as the result of the display at the Paris Exposition.

## QUERIES AND REPLIES.

### Resistant Apple Roots.

TO THE EDITOR:—About eight years ago I got from the University two apple trees that came from Australia and were said to be aphid proof. This year the trees are loaded with apples. Do you think seedlings grown from the fruit would be aphid proof? The apples are red, late fall, and of poor quality. I have never seen any of the woolly aphid on the two trees I speak of, but other trees within 20 feet from them have considerable.—GROWER, Alameda county.

We cannot tell what variety of apple you have. It is probably some kind which is thought worth propagating in Australia. It may not be of any account here, nor does it matter much either way. The essence of the experiment is in the root of the tree. If that is free from aphid in the midst of other trees which are infested, that is what you want. That is the way it resulted in the trials at Berkeley. The point now is to get whatever varieties of apples you desire established upon roots from that tree. Dig down and take root pieces from the tree as far as it can be done without destroying it. With those pieces, and with scions of the kinds you wish to grow, make root grafts this winter and put out in nursery rows in the spring, and you will have, this time next year, a lot of yearling apple trees on roots which the aphid cannot injure. When you dig these trees save all the roots which the trees do not need in transplanting, and save them in moist, cool sand for more root grafts. Now you are started on the Australian method of growing aphid-proof nursery stock, and we believe it will not be long before only such trees will be salable in this State, as is now the case in the Australian colonies. When the root is resistant the insect, even if it should attack the top, can be kept down by sprays, or our many ladybugs will destroy it. The insect need not be feared when we can prevent its fortification on the roots.

Seedlings from fruit grown on resistant roots, nor seedlings of the Northern Spy, which is resistant throughout, can not be relied upon to be resistant. Seedlings vary; the original resistant wood or root must be used in propagation.

### Die-back of the Mission Olive.

TO THE EDITOR:—Two years ago last February I planted about 260 olive trees, four varieties, Nevadillo Blanco, Ascolano, Mission and Manzanillo, but chiefly the two latter varieties. This summer a number of the Mission have commenced to die back. The trouble up to the present is entirely confined to the Mission variety, although mixed in with the others and receiving exactly the same treatment. In the affected trees a quantity of suckers puts up from just below the surface of the soil. The soil is locally known as "mealy 'dobe," pulverizing nicely and very retentive of moisture. The trees have had a moderate amount of well water applied in basins sufficient to cause the healthy trees to make a good growth. Water is found at a depth of 200 feet. Can you give me any reason for this behavior? Do you think that too deep planting might cause it? This is the only reason that I can assign. At the time of planting I was advised to plant as deeply as possible, and whenever the hole permitted the trees were planted deeper than they had been in the nursery; at the same time this probably happened to the other varieties as well, and I notice in Mr. Lelong's report

for this year he quotes a Mr. F. M. Hunt of Redlands as planting from 6 to 12 inches deeper than in the nursery. Any advice you can give me will be very welcome.—R. P., San Diego.

We cannot expound this matter. We should not attribute it to deep planting—certainly not during the last three years at the south, if ever. It is dangerous to plant deeply in heavy soil with the chance of excessive moisture, but neither of these conditions probably have been present in this case, nor would they be likely to affect one variety more than another in any event. We publish the account that other growers may explain it if they can. Meantime we should like to have specimens of affected leaves and twigs to see if any specific disease can be detected.

### Alfalfa for Laying Hens.

TO THE EDITOR:—Since the Farmers' Institute was held here our people—who heretofore have been living in Egyptian darkness—are alive to the benefit of feeding alfalfa to laying hens. Perhaps you may not believe it, but I sent to the city for two bales, and a neighbor of mine received on the same boat one ton. Is it all right?—CHICKENIST, Sonoma.

To be sure, it is all right. The marvel is that you had to wait for a Farmers' Institute to strike you on the head with it. You might have read it in the PACIFIC RURAL PRESS years ago, and almost every month ever since. The Petaluma chicken people feed alfalfa hay by the boatload, and have been doing it for years; but, then, the hills are pretty high between you and Petaluma, and you may not have seen it. The trouble with both your valleys is that you do not know how well you can grow alfalfa for yourselves, and so you buy it in San Francisco. There is plenty of land in Sonoma county which will grow good alfalfa, and, of course, plenty that will not. Grow it if you can, buy it if you must, but do not deny your hens soaked-up alfalfa hay when the green feed is short. It is just the thing to balance the grain ration and make them strong and shake the eggs out of them.

### The Northern Spy Apple.

TO THE EDITOR:—I have seen the statement in print that the Northern Spy apple root is resistant to the woolly aphid. Is that statement true, or is there any apple that is? Can you tell me where I can get any seedlings for root grafting that would be resistant, or where I could get seeds for planting, and be positive I was getting what I want?—ORCHARDIST, Butte County.

We have already discussed several of these points in answering another question along the same line. The Northern Spy is by all experience we know of a resistant root, but the seedlings are not trustworthy and are not used in making resistant trees. You must have the roots. We do not know that they can yet be bought in this State, but they certainly will be soon, for a sharp demand is arising, and they will be as common ere long as resistant grape roots. We believe the nurseryman who first equips himself in this line and advertises well will do a rushing trade. Resistant roots for grafting can be had in any quantity from D. Hay & Son, Auckland, New Zealand, and from other southern hemisphere propagators whose names we do not happen to have at this moment. They should be available here in quantity by this time.

### Rye Grass.

TO THE EDITOR:—Some time ago I read considerable about rye grass in your paper. Can you inform me who is successful in raising the grass, also who has the seed for sale and at what price? Has it proven a success on irrigated land?—OLD SUBSCRIBER, Crow's Landing.

Two species of rye grass are proving of much value both for moderately dry lands and for moist land. They are the Australian rye grass, an acclimated English rye grass coming to us from the southern hemisphere, and Italian rye grass. These are being well spoken of by growers in many parts of the State. Seed can be had of seedsmen.

### Russian Thistle.

TO THE EDITOR:—I send you a sample of a weed which is becoming common in the lower part of Orange county. What is it?—READER.

It is the Russian thistle, which is counted one of the worst weeds recently brought into the United States. It is coming to California with alfalfa seed bought in the Central West probably and has already been reported in several places. You can get a

pamphlet telling all about it by applying to the agricultural department of the University at Berkeley. It is an annual and can therefore be held down by cutting before it blooms. There is little danger of its spreading in our fruit lands because of the constant cultivation, but in grain lands and pastures it is likely to be a great pest. It should be rooted out wherever found, before it ripens, breaks loose and tumbles all over the country.

### A Later Navel.

TO THE EDITOR:—Has there been any new discovery of a later variety of the Navel orange?—GROWER, Orange.

We do not know of any. The Valencia Late is relied upon for a late fruit, and when well grown it is a splendid fruit and often very profitable.

## WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending September 24, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

### COAST AND BAY SECTIONS.

Conditions have been generally favorable for fruit drying during the week. In some sections it is said that another week with favorable conditions will complete the drying of the season's fruit crop. Salway peaches are nearly all gathered in the Santa Clara valley, and grapes are being delivered to the wineries; there is a good crop of grapes, of excellent quality. In Mendocino county prunes are large in size and the yield is abundant; the crop is being cured in excellent condition. Hops are mostly gathered; the yield is below average, but the quality is good. Some damage was done to hops and grapes on vines by the norther on the 20th and 21st. Fires are destroying timber and pasturage in many places.

### SACRAMENTO VALLEY.

Dry northerly winds and high temperatures during the latter part of the week were favorable for drying prunes and raisins. Grapes on the vines and late deciduous fruits were considerably injured by northers in some sections. A heavy crop of grapes, excellent in quality, is being gathered in Yolo, Tehama and other counties. The prune crop in Butte county is nearly all gathered. Most of the fruit for drying will be on the trays by October 1st. Oranges are in good condition, and prospects continue favorable for a large crop. Plowing and seeding are in progress. Fires are damaging hay, pasturage and property in some sections.

### SAN JOAQUIN VALLEY.

Clear, warm weather has prevailed, with high temperature toward the close of the week. The nights have been unusually cool, with heavy dews in some places, somewhat retarding the drying of fruit and raisins. High winds on the 20th damaged late fruit in some sections. Prunes are yielding a fair crop, though many of them are small in size. Many localities report that the raisin crop will be larger than heretofore estimated. Wine grapes are yielding a good crop in some places, but are light in others. The almond crop is nearly all gathered. A large crop of sweet potatoes is being harvested. Pasturage continues fair. The seeding of summer-fallow ground is in progress. Much damage has been done by fires in San Joaquin county.

### SOUTHERN CALIFORNIA.

Clear, warm weather during the week has been favorable for raisin making and fruit drying. Grape picking and wine making are progressing rapidly. Apples, pears, plums and prunes of excellent quality are being gathered. Walnut picking has commenced; it is now reported that the crop will be about the same as last season's. The water supply is fair. There was a light thunderstorm with a trace of rain on the 22d at San Diego.

LOS ANGELES SUMMARY.—Bean cutting and thrashing continue; crop light. Sunday threatening; rain now would be disastrous to beans. Oranges are in fine condition; the change in color is noticeable. Grape picking is on, and wineries are in full operation.

EUREKA SUMMARY.—Weather conditions are generally favorable for vegetable growth. Corn, tomatoes and peas are plentiful. High northerly wind did no material damage to apples.

### Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Sept. 27, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.	Total Seasonal Rainfall to Date.	Total Seasonal Rainfall Last Year to Same Date.	Average Seasonal Rainfall to Date.	Minimum Temperature for the Week.	Maximum Temperature for the Week.
Eureka.....	.27	1.16	1.05	.44	64	100
Red Bluff.....	.00	.02	.54	54	96	96
San Francisco.....	.00	.06	.28	50	92	96
Fresno.....	.14	.00	.31	48	96	96
Independence.....	.05	.07	.06	38	84	94
San Luis Obispo.....	.00	.00	.34	44	94	94
Los Angeles.....	.01	.14	.50	50	88	88
San Diego.....	.00	.10	.54	54	68	102
Yuma.....	.02	.08	.66	*60		

\*Incomplete.



## FRUIT MARKETING.

### What Can Be Done for California in Great Britain.

TO THE EDITOR:—I have been the best part of ten years in London, and I feel sure that if some such scheme as I suggest below were adopted by the people of California it would be a success, and it would in time put millions of dollars in the pockets of California producers. The almost glut in the prune trade and the low prices of other fruits, also the opposition threatened by the middlemen of the Atlantic coast, makes a discussion of this matter opportune.

**SYSTEMATIC ADVERTISING OF CALIFORNIA PRODUCTS.**—I advocate the establishment in London of a "California Exchange," for the purpose of advertising the resources and climate of California, and to increase the outlet for California products, particularly fruits (fresh, dried and canned), wines, oil, etc. It would be advisable to arrange for exhibits, advertising and publications to make the exchange a creditable and useful exponent in Great Britain of things Californian. The State Legislature should be asked to contribute an annual sum toward the expenses of keeping up this department of the exchange.

**THE OPPORTUNITY.**—The commercial side of the proposition is one worthy of consideration. The markets in England are "wide open" for everything we produce to export. Trade prices in London are much higher for all articles of every-day consumption than they are in California, even after the cost of transportation and a fair percentage for other legitimate costs are added.

**THE BRITISH CAPACITY.**—There are in England and Scotland forty millions of people waiting to be fed. Fruits, fresh, dried and in tins, are coming into more general use each year. The dried fruit sold in London comes almost entirely from the United States, France, Bosnia and some other Mediterranean localities. The production of fruit in England supplies the demand for only a very limited period. Except what is made into jam and marmalade, the fruit is all consumed in a fresh state. Hardly any of it is dried or preserved for future use.

The mass of the people are beginning to realize how palatable and healthful our dried and preserved fruits are.

In 1894 some 95,000 cases of canned California fruit were exported to England. Last year the quantity was increased to 492,000 cases, or over five fold. This 492,000 cases represents only about one-sixth of the annual output of California canneries. There is no reason why England and Scotland should not consume 1,500,000 cases of our canned fruits each year. This would represent less than one can per annum per capita.

Even the costers and all classes of laborers are accustomed to pay from 6 pence per pound for fruit that takes their fancy; and I doubt if one would find many families among the laboring classes where at least a few shillings is not spent each month for preserved fruit.

If California fruit canners could sell one-half of their annual output to England, it would so relieve their home market as to very considerably increase the prices to be realized for goods for domestic consumption. It would be a reasonable estimate that canners would receive at least 1 cent per tin more than they do now in seasons of average prices. This would represent at least three-quarters of a million dollars' increased net value on canned fruits.

**CHEAPER TRANSPORTATION.**—With each year facilities for cheaper transportation are getting more common. Even before the canal is completed across the Isthmus the carrying of California produce to England is going to increase very largely. Lines of steamers are already in operation around the Horn. It only needs a little energy and co-operation for consignors of dried fruits to have them laid down in London at a total cost for transportation, insurance and incidental expenses of from  $\frac{1}{2}$  to 1 cent per pound. When the canal is finished steamer competition will soon get the rates down to say  $\frac{1}{2}$  cent per pound on non-perishable goods. When that time comes, as it surely will, California produce will be as near the English market as San Francisco is to Portland, and much closer than Chicago will be to San Francisco. It is not too much to say that if the markets of England and Scotland are properly worked they will readily be made to absorb one-half of our annual Californian output of dried and canned fruit.

It is also certain that if such were the case the whole output of our orchards and vineyards would be increased in value by at least 15%. This increase of value might easily represent \$20,000,000. The question, then, is how to open up this extended market in England for Californian goods.

**ESSENTIALS.**—Three things are absolutely essential:

First—All produce to be shipped to England must be of superior quality and packed in as attractive a manner as possible.

Second—They must be laid down in England at a minimum cost for freight.

Third—They must be introduced generally all over

the country, and their merits and superiority brought home to the consumer.

The grower is interested in the production, transportation and distribution of his produce among consumers. It is evident California can produce all right, but the matters of transportation and distribution are only in an embryotic stage.

It costs little or no more to haul or carry a ton of dried fruit than it does a ton of grain. So, why should it cost three or four times as much to ship fruit to London as it does to ship grain?

**PACKING.**—There is one matter connected with the selling of fruit which has not been sufficiently understood by the growers and packers of fruit in California. More care must be taken to grade the dried fruit, and to pack it honestly, attractively and in such shape as to meet the requirements of the retail trade.

Fruit packed in bulk does not, as a rule, realize the best prices. The better grades particularly should be put up in more attractive shape. Many of the finer French prunes and plums come to the English market packed in glass bottles or jars.

By this means the quality of the fruit shows to better advantage. Considerable quantities of this grade of fruit is sold at prices ranging from 1 to 2 shillings per pound. It seems that in California last year the medium sized prunes brought relatively more money than the larger and choicer grades did.

If this larger and more showy fruit had been packed in glass or even in small neat boxes of five and ten pounds weight they would have sold readily on the London market at from 8 pence to 1 shilling per pound. I am also of the opinion that if choice fruit were put up in say one and two-pound neat boxes either of pine or cardboard, with attractive labels, etc., there would be a large field open for such fruit in preference to buying from the bulk.

The small packages might be packed in cases to hold twenty-five or fifty pounds and they would certainly "take" with the trade.

**CHEAP FREIGHTS.**—There should be a combination among all growers and shippers of agricultural products looking to the lowering of the costs of transportation. The costs of rail transportation must be governed by the competition among carriers. This does not apply to such an extent to water transportation.

If shippers could pool their stocks, they might easily charter vessels at rates that would figure out considerably less than rates by regular lines.

Freight is even now being carried in small lots between London and San Francisco in large A1 steamers of wooden build and equipment for as low as 60 shillings (\$14.50) per ton. Does any one doubt the willingness or even eagerness of carriers to make considerably better terms for large and repeated shipments?

When the canal is through the Isthmus the distance will be shortened by more than one-half, and then we will see plenty of steamers ready to charter San Francisco to London, at under  $\frac{1}{2}$  cent per pound.

Why is it that when prunes in California will hardly sell at above 3 to 4 cents per pound the same quality fruit in London retails at 8 to 12 cents per pound? Freight charges cannot account for more than 2 cents of the difference.

**PRODUCERS' EFFORTS.**—The main trouble lies in the lack of ability shown by the producer in getting his goods into consumers' hands. We might raise a cry against "grasping middlemen." But it is not the fault of the middlemen. If producers will not furnish the energy and the capital needed to market their goods it is fortunate for them that there are "middlemen" to do the work for them. The producers of California are the wealth-producing portion of her population. They are the backbone of the State. They also take a pride in supporting the manufacturing and other dependent interests. But through lack of co-operation and business management the producers have come to a point where they get the husk and some one else gets the kernel. This is not as it should be. There is but one remedy for such a state of affairs, and it is that producers should take active steps to manage their own business and to capture other markets for their produce.

**PRO-AMERICAN SENTIMENT.**—Thoughtful men will ask how this is to be done. As I have stated, the market prospects in England and Scotland are better than can be found in any other country.

I can remember that when I first went to England—some eleven years ago—there was a "feeling" against things American. There was not the same entente cordiale between John Bull and Jonathan as exists now. At one time it was a rare sight to see the Stars and Stripes floating in London. Now, next to the Union Jack, the American flag is the most common. Perhaps this is sentiment, but, be that as it may, let us profit by it.

In no country in the world is there so much ready money in so small an area.

Is it not worth while for California—the greatest and richest State in natural resources of all our States—to make a strong effort to capture the fruit market of England and Scotland?

**A COMPANY PROPOSED.**—It can be done on the lines I have indicated. Of course, we can not expect the State to go into the matter on a commercial basis. Nor would it be practical to expect the producing

interests to all combine and co-operate financially and directly in furthering the sale of our produce here. But it would be the proper thing if they could do it.

It seems to me that the simplest way would be for some fifteen or twenty of the representative business men of California to take the matter in hand and form a company for advertising and trading purposes in Great Britain on some such lines as I have indicated. The company should have an ample capital. The business should be managed by a board of directors selected from the ablest managers, financiers and most energetic business men in California.

The London end should be managed by some one of executive ability, with the energy, push, faith in the superlative excellence of things Californian, and with a knowledge of the English public and English business methods.

We don't want a diplomat or an orator or an after-dinner speaker simply as head of affairs there. We want a man who knows what he has to sell and who can go to the traders and commercial houses and by his representation of facts make them take our fruit in preference to that of France or Italy.

The California Exchange Co. (if we give it that name) should arrange to take up the English agency for all of the largest producers and packers in California. Dried and canned fruit, raisins, figs, olive oil, wine and anything else in demand in England should be handled in wholesale quantities by the California Exchange Co.

Of course, the new company have the active opposition of the numerous concerns exporting and importing fruit from California. But a certain amount of opposition would be healthy, and, besides, the company with the best executive and business talent would do the bulk of the business.

California produce should be shipped in large bulk, rates of transportation and other expenses would be reduced to the minimum, and preparation would be made beforehand to market the fruit when it arrived.

I have always thought that the proper way to sell California fruit and produce would be for some central concern to do all of the importing, and instead of trying to sell at retail arrangements should be made with every reputable house or tradesman over there to carry a stock and push the sale of the goods. London is the home of the large co-operative concerns, with branches dotted all over the city, and in all of the populous centers of the provinces. Many of these stores control from 20 to 50 and even 100 separate retail establishments, all under one management. The California Exchange should push its business with every one of these stores.

When we get our stocks there our manager should go to the management of each of the stores and induce them to push our goods.

A proposition could be made to them to take large quantities for each of their branches, and agree to make a display of the goods in the windows and to push the sale of them in preference to the same class of goods from other sources. They should have the goods to sell without actually buying and paying for them, and they would be required to render an account each month of all goods sold and to pay for those actually disposed of. By this means we would enlist the active support of every dealer who held stocks of our goods for sale.

It would be far better for the owners of the goods to have them in London exposed for sale, and actually being sold, than to have them lying in warehouses in California, subject to the depressions and fluctuations of local markets.

If say only 25% of the California crop could be exported to England it would have a very buoyant effect on the local demand and on prices obtainable in California, so that indirectly the operations of the California Exchange Co. would raise home prices on all produce in which it dealt, and thus help the producers at home by a number of million dollars each year.

Besides indirectly adding to the wealth of the State, a substantial profit on each year's business should be made so as to pay the promoters and stockholders of the company a good income.

Of course, it will necessarily take time to work up a very large business, but it can be done, and it only needs being started properly and managed in a businesslike manner to eventually be a very large business. Given the right management, a fair capital and a determination for success, and there would be no limit to the usefulness and dividend-paying capacity of the venture.

M. H. DURST.  
Wheatland, Cal.

## HORTICULTURE.

### Outlook for the Orange and Walnut.

By L. B. BENCHLEY at the University Farmers' Institute at Fullerton.

In discussing the outlook for the orange and walnut—the subject assigned to me—in reference to satisfactory returns upon the labor bestowed and money invested, it will be difficult to arrive at conclusions sufficiently definite and reliable that may be taken as an infallible guide in our efforts to attain the success



we all desire. The question of "The Outlook for the Orange and Walnut" has no interest to us only as it points to generous returns upon our investment of capital and labor. There are, however, certain recognized primal and fundamental conditions antecedent to success which may be of interest to mention:

First—Favorable climatic conditions where the untimely freezing temperature may not be experienced.

Second—Those soil characteristics embodying the elements from which growth and fruit are produced.

Third—Careful and constant tillage with an intelligent use of such fertilization as will restore to the soil the nitrogen, phosphoric acid and potash consumed by the tree in its growth and fruitage, and

Fourth—Timely irrigation that there may be no check in the growth of wood and foliage, and continuous perfecting of fruit.

These primal conditions secured, and the careful and honest packing of the fruit, and its intelligent shipment to suitable market with fair and honest transportation of his products secured to him, will most assuredly give the grower a satisfactory return upon his investment of labor and money.

How CAN THOSE CONDITIONS ASSURING SUCCESS BE SECURED?—This is a reasonable and proper question. Certainly not by the grower neglecting to avail himself of all sources of information within his reach, being content to plod on in ignorance of the fundamental laws of agricultural science, nor by the grower of citrus fruits and walnuts who knows nothing of the "Year Books" of the United States Department of Agriculture, nor of the many "Farmers' Bulletins" giving the results of the most careful and intelligent experiments in every department of agriculture, who has never studied that most instructive book, "California Fruits and How to Grow Them," and in whose home the standard agricultural papers of the day are not found and who finds no interest in the "Farmers' Institutes" so ably and instructively conducted by our departments of agriculture—to such a grower "The Outlook for the Orange and Walnut" is a most uncertain and hazardous calling, but to the one who carefully studies the nature and characteristics of the soil and its requirements as indicated by the growth and fruitage of his trees, availing himself of every possible source of information, both theoretical and practical, noting carefully the outcome of his own experience and efforts, having but one controlling purpose to grow the most perfect fruit and place it before the consumer in the most attractive form—to such a grower success is as certain as the promise that "seed time and harvest shall not fail."

Increasing demand and consumption will surely keep pace with our 75,000,000 increasing population. New markets will be found and opened, and while the large demand and satisfactory prices of the past and present year may not always be realized, nevertheless the intelligent, industrious and conscientious grower of the orange and walnut may confidently look for profitable returns upon his investment of labor and money.

We think past experience in the horticulture of southern California and the present outlook warrant such assurances, and in this most compensating calling the grower will find that patient, intelligent industry is the only condition assuring success, and to such "The Outlook for the Orange and Walnut" is full of encouragement.

### Pruning the Lemon Tree.

By R. C. ALLEN of Bonita, San Diego County, at the University Farmers' Institutes at La Mesa and Chula Vista.

Although it is now some dozen years since the lemon industry became one of importance, and although during that time constant experimenting has been going on, yet even to-day there is a very great difference of opinion among growers as to what is the best method of pruning the tree. Probably no one method is the best for all soils and conditions; and, again, the results obtained from two very different systems may be almost equally good. As an illustration, I may mention Mr. Little's orchard at Ontario as contrasted with a typical orchard on the so-called Baronio system. Both may be getting the best attainable results from local conditions, but I believe that Mr. Little would contend—and I think rightly—that it would be impossible for his orchard to yield the crops it does if pruned by the Baronio method.

Mr. Hall, our horticultural commissioner, once made a remark which seemed to me to get right at the kernel of the matter. He said that the Baronio system was particularly adapted to shallow soils, incapable of maintaining a tree of good size. On such soils I believe the maximum of attainment can be got with Baronio's pruning.

THE GROUND FLOOR.—But, granting that equally good results may be realized from several different methods of shaping the tree, it seems to me that experience has decided some points that were debatable a few years ago. I think few, if any, growers would contend that the lemon tree is best left without any pruning whatever, though many held this belief ten years ago. I believe also that experience has demonstrated the mistake of the high pruning that was common much later and may even be seen to-day. Personally, I favor a low head—anywhere from 2 to 3 feet at the time of planting, and rather below 2 than over 3. As the tree develops, allow the

side branches to come down to the ground, the ends just touching it. Many keep their trees up in order to cultivate close up to the tree, though, provided the ground is shaded, the trees are far better off not to be disturbed near the trunk. The first 3 feet from the ground up is the most valuable and productive part of a well-pruned tree, and it will not do to allow any theories of cultivation to deprive us of it.

THE UPPER STORY.—So far as we have proceeded—that is, the moderately low head, with branches reaching to the ground—I believe it has been demonstrated to be correct practice by the overwhelming testimony of experience, but as to how we shall treat the top of the tree we shall find great diversity of opinion. I have adopted, in our orchard at Bonita, the system developed by Messrs. Paton and Rhind. It is just three years ago since I had the orchards pruned by this system, and up to the present time the results have more than met my expectations.

The method is simply to secure an open-centered plant—a point now commonly aimed at. In working toward this since the first pruning the main branches, forming the framework of the tree, have filled up with fruit wood and a constantly increasing proportion of the crop comes from the center of the tree. A large part of this fruit grows on short spurs situated upon the strong limbs, and is therefore developed and carried with the least possible strain on the vitality of the tree.

Very little cutting back is done under this system. The branches forming the outer rim of the tree are cut off at a height of about 8 feet from the ground. In subsequent prunings all sucker growths are wholly cut out from the center, and as this part of the tree fills up with fruit wood, and later with fruit, these sucker growths gradually become less frequent. On the outside the growth is kept cut back to the original height of 8 feet, and thus the tree, once having reached the desired size, is kept there, and as such a tree is large enough to produce abundant crops and its chief strength goes into this production, there seems no difficulty in maintaining its thrift and vigor at a fixed size without an undue amount of cutting. Although our trees are now producing more than twice the fruit they ever did under the old system, we do not cut off anything like so much wood every year as we used to, and as the wood we do cut is so easily reached the cost of pruning is much lessened.

ADVANTAGES.—As compared with a perfectly balanced tree pruned in the old way, on the theory of an even distribution of branches, the advantages of this system are:

First—Greater ease in reaching all parts of the tree, and therefore economy in both picking fruit and pruning.

Second—Economy in the strength of the tree, because it is not maintaining a lot of branches which are only doing effective work at their tops, hence less fertilizer is required per ton of fruit produced.

Third—Superior quality of fruit, because of a much larger proportion grown inside the tree.

I note a greatly improved quality in our lemons since adopting this system of pruning, though I attribute part of this improvement—just how large a proportion I do not know—to more generous fertilizing.

TREES TOO LARGE FOR THRIFT.—I believe that even on very rich soils it is a mistake to allow a lemon tree to grow beyond a size of which every part can be conveniently and economically reached. Mr. Little told me that he had cut 14 feet off the height of his trees with great benefit to them and himself, and, although his trees are still too large for economical gathering of the fruit, they seemed to me the most beautiful example of their system of pruning which I have ever seen. There is a perfect balancing of branches throughout and the trees are symmetrical.

As Mr. Little's orchard is generally conceded to be the most productive in the State, we must allow, whatever may be our prejudices in favor of some other system, that his method is capable of good results. His soil, though not rich, allows an unobstructed development of the root system, so that his trees, though Eureka's, must have attained an enormous size before he cut them back. I may mention, incidentally, as I find many people suppose sour stock to be weak in growth, that his trees are budded into the Florida sour orange root.

When at Redlands the other day I saw a striking illustration of a tree being too large for its best vigor and fruitfulness. Prof. Paine showed me trees, side by side, some left in the way in which they had been pruned up to a year ago and part cut off at about 8 feet. They were not pruned in the hollow center method with which we are familiar in this locality, but simply cut off. The trees not cut ran up to a height of fully 16 feet, perhaps 20, and although they had received good care and plenty of water and fertilizer their color was pale and yellowish, and there was scarcely any fruit on them. The trees cut off the previous year had a magnificent dark color and were loaded with fruit. This seemed to me to show that it is possible even on a good soil to grow a lemon tree which is so large that even the support of branches and foliage is too great a drain on its roots—otherwise one can hardly account for the increased vigor of the cut-back tree, notwithstanding the load of fruit which it was carrying.

The prime object of open-center pruning is to get

as far as possible all meat and no bone—to have all the tree producing something and no drain on the root for useless timber.

SOILS AND STYLES OF PRUNING.—Referring again to the question of soil in connection with pruning, it is evident that a soil which, whether from shallowness or other cause, does not permit the free development of a deep, symmetrical root system will not support in vigor a large-sized tree. Obviously it would not be wise to plant an orchard in such soil, but, as in this life we frequently have to take the bad with the good, most of us have poor spots in our orchards where we must limit the size of our trees, and it seems to me one of the merits of Paton and Rhinds' method that the size of the tree can be adapted to the local, varying conditions of an orchard without change of system. Conversely, there are soils so rich that a generous size must be allowed the tree or it will burst all bounds in a wilderness of suckers. I feel sure that if I had my best trees cut back as some growers cut theirs a few years ago that not only should I have been without an income for at least two years, but also that it would have been next to impossible to control the sucker growth. As it was, Mr. Paton left all side and lower growths practically without cutting back. This kept the energies of the tree at work forming and maturing a large crop of fruit, and thus the sucker growth was not excessive, and we realized as large a crop as the previous year and of better quality. Thus we made the change from the old to the new without any expense.

## THE DAIRY.

### A Little About Dairying.

By WILL S. YOUNG of San Luis Rey, at the University Farmers' Institute at Escondido.

There is probably no branch of agriculture that pays so high a premium on intelligence, energy and attention to detail as dairying. It is a business that can be made very profitable, or the reverse, according to the ability, common sense and science that are brought into use. I say science—because the conditions of dairying have changed very materially in the past few years. In these days of keen competition, the profit goes to the dairyman who introduces the most scientific methods into the art of milk production. He must be, not merely a milk producer, but a skilled manufacturer, working up the raw material, in the shape of various feedstuffs which he raises or buys, with the assistance of that wonderful and complicated piece of machinery, the dairy cow.

WHAT INVESTIGATORS AND TEACHERS HAVE DONE.—It is not a difficult matter to feed and milk a cow and turn the product into a certain class of butter; but there is a vast difference between the methods of feeding, etc., as generally practiced, and the rational and scientific methods advocated by State dairy institutions and practical dairy editors. We farmers are too apt to treat the labors of our dairy professors and book farmers lightly, overlooking the fact that they have the time, inclination and opportunity to study the economic problems of breeding, feeding and every department of the management of a dairy herd. They stand in the same relation to the farmer that the inventor does to the mechanic. In a way, they have reduced dairying to a science; they know in what proportion to feed combinations of fodder and grain to supply the cow with the elements, or digestive nutrients necessary to the economical production of milk, the fattening of stock or the development of calves destined for the herd. Our dairy editors supply us with all available information from all sources, and no progressive farmer should try to produce milk without a good dairy paper to consult. The book farmer takes advantage of their combined labors and turns it to account—bank account.

POINTERS TO PROFIT.—Most of us who are in the dairy business are in it for profit. To secure what profit there is in it means studying every detail, selecting the kind of stock, providing proper quarters for the herd, finding out the best crops to grow for feeding, and those best suited to the farm, regulating the breeding season, etc. There are scores of items one might mention as giving opportunities for the profit to leak through. It is generally conceded that the Jersey is the best all-around cow to use in connection with the creamery. Their butter makes up firmer than that from other breeds, the test is usually high, and as the percentage of loss in skimming is lower as the quality rises, it would be more profitable to the creamery owner than the product of, say, the Holstein, which gives a large flow of low-test milk. The cost of feeding a Jersey cow is considerably less than the average Holstein. Whatever breed we select will require the same care, kind treatment and punctuality in milking and feeding to produce the best results. If there is anything a cow likes as well as a good feed it is punctuality; keep her waiting for the milker and you will get less milk than if you were on time. If you milk at 5 o'clock in the morning, be on hand at 5 o'clock in the evening; don't milk at 4 o'clock in the morning and 7 o'clock at night, simply because you have a hired man. If milking on dairy farms were less of a "chore" and



more a part of the day's work, there would be less trouble in getting good milkers among ranch hands. It is useless to expect men to work from 7 A. M. to 6 P. M. on the ranch and then find pleasure in milking ten or fifteen cows, especially if it is cold and wet and no shelter.

**DAIRY SHELTER.**—The matter of shelter for milch cows is a thing we are apt to overlook in this glorious climate. We none of us leave our expensive farm machinery lying out in winter storms, but put it under a roof of some kind; but the machinery that turns out the creamery check may take the storm, standing in the corral, if too wet and muddy to lie down. Under such circumstances a heavy shrinkage of milk is experienced; the food the animal has consumed is needed to supply warmth. A wet, miserable cow is not concerned about secreting milk or eager to give it down to an equally wet and uncomfortable milker. Neither is in the humor to perform duty faithfully and the milkpail suffers. The quality of milk is not improved by the inevitable admixture of rain water and dirt from the dripping cow and the milker's clothes. A lot of profit runs off into the mud during winter where the herd is without shelter. A little money invested in a comfortable stable is a good investment, not only in regard to the comfort of the cow and the milker, but for economy in feeding. With good stalls and mangers, it is possible to feed intelligently; each animal's capacity can be gauged; it gets all that it is intended to have without the necessity of fighting, and, what is very important, there is no waste. It is difficult to feed a strictly balanced ration where cows are running on pastures, as they do here the year round. Excellent results may be obtained by close observation of the effect of the various feedstuffs available, especially if we study their composition, as given by any of the leading dairy papers.

**WINTER DAIRYING.**—The balanced ration is simply feeding reduced to a science and is an important factor in winter dairying. We should have more milk produced in the winter. The bulk of the milk produced in this county is delivered at the creameries during the period from April to August, when the price is lowest, instead of during the time when the price is high and better butter can then be made. At one creamery the amount of milk delivered in April averaged 2200 pounds daily; in November of the same year the average was 850 pounds, yet the expense of converting the two amounts into butter was practically the same. We ought to consider the creamery owner's interest better than that. Whatever conduces to his prosperity will benefit the patron. The interests of owner and patron are identical.

**MILK TESTING.**—There is no more prolific cause of friction between operator and patron than the monthly testing. When a patron's test goes up everything is smooth, but when it goes down there is trouble. Then it is in order to accuse the operator of reading the test low, or of favoritism (toward some one else), etc. This may all be avoided by patrons acquainting themselves with the individuality of their cows. Test them systematically. The usual practice of taking one sample from each cow to the creamery to be tested does not fix the standard of that cow. Prof. Haecker gives a monthly record of a cow which he tested every day. It ranged from 7 to 2.9. Average first week, 5.7; second, 4.4; third, 4.0; fourth, 3.2. Any one sample would have been misleading. Suppose the one-sample arrangement had shown 7% and the average at the creamery had been about 4.3. It would certainly have been very unsatisfactory. Give the creamery man a chance; he is just as honest as the rest of us.

By systematic testing we shall find some of our best (?) cows are not paying for their board. It does not follow that a high-test cow will produce high-testing progeny; but the Babcock test, if given a fair show, will tell you just what your cows are doing. Testing is not a difficult operation. It needs care, certainly, and only an average amount of intelligence; but it saves a lot of bad feeling when the creamery test goes down. The farmers of San Luis Rey have formed a dairy association. The first object was the purchase of a Babcock tester, and the result of its use has been very satisfactory to all concerned.

We have a lot to learn in this dairy business, and the sooner we appreciate that fact the sooner we will be on the road to success, the landmarks to which are industry, observation, kindness and cleanliness.

THERE are two kinds of men: those who go ahead and do the things they are expected to do, or are paid to do, and those who always have the best of excuses for their continued failures. And the man who is good at making excuses is rarely good for anything else.

FOSSILIZED cedar tree trunks 3 feet in diameter have been found in California drift mines at points over which were 700 feet of lava, a few inches of the outside changed to lignite, the remainder perfect in the grain and retaining the pungent odor of the wood.

ONE can always concisely explain what he thoroughly understands, and in any event his explanation of it is usually in proportion to his knowledge of the subject. Indistinctness of expression is inevitable where there is obscurity of thought.

CALIFORNIA'S average yearly output of gold for the past fifty years has been about \$26,000,000.

## SHEEP AND WOOL.

### California Angora Goat Breeders' Meeting.

Written for the PACIFIC RURAL PRESS.

The regular annual meeting of the California Angora Goat Breeders' Association was held at Sacramento, Cal., Sept. 15, 1900, President C. P. Bailey occupying the chair.

There was a good attendance of interested goat men. All reported good prices for mohair and goats, and the great number of inquiries received by them testifies to the large and increasing interest in the mohair industry.

**HANDLING THE KIDS.**—A general discussion ensued on the different methods of handling the kids during the kidding season. It was the general opinion that, with a flock of 1000 ewes, 80% was a good increase for the year, and in the case of stormy weather at the critical period when the kids were young, a much smaller number was often considered good. In the smaller flocks of from 100 to 600 a very much larger number of kids could be raised. One man said that in a flock of 500 ewes he lost five kids only, and in still smaller flocks the percentage of loss was even less.

Most of the breeders kept their kids in corrals and allowed the ewes to go out to feed during the day, coming in to their kids in the evening. One of the members had successfully raised kids by allowing them to run at the ewe's side continuously, but he admitted that the ewes ran on level lands and did not have to move more than 2 or 3 miles during the day for feed. If the kids are allowed to run with their mothers before they are two months old, there would be a considerable loss, since they fall asleep under brush, where they are unnoticed by the herder, and the flock goes on without them.

**MOHAIR CLIP AND PRICES.**—The amount of mohair raised and the price received was the next subject of discussion. Mr. Harlan spoke of shearing a wether with a fleece of thirteen pounds, but he thought three and one-half pounds a good average for ewes and kids. He related an incident which happened in his flock. In leaving the mountains last fall for his winter range seven goats were left by mistake, and on his return the next spring he found them bunched on top of the mountains, where they had remained all winter. Mr. Harlan stated that these goats had a very long growth of mohair, the fiber reaching a length of 11 or 12 inches.

W. W. Wright told a similar story of a few goats which developed a remarkable fleece. He moved ten head to the Sierra Nevada mountains with a bunch of sheep during the dry season. The next October these ten goats sheared an average of seven pounds, the remainder of the flock that had rustled for an existence at home showing at the same time scarcely three pounds. Mr. Wright reported from a herd of 1000 head, including kids, an average of four pounds for a ten months' growth. He also sheared a buck that netted him sixteen and one-half pounds for thirteen months, or twelve pounds for nine months and four and one-half pounds for the next four months.

The majority of those present sheared but once a year, finding it more advantageous to produce one long fleece than two short fleeces.

J. M. Wimmer stated that he thought that his goats sometimes lost nearly a fourth of their clip before shearing in the spring, but he considered it better to have the remaining three-fourths of long, fine hair than to have two short clips. Mr. Wimmer stated further that he had received 32 to 38 cents for last year's clip.

The prices reported generally were from 21 to 25 cents for a half year's growth to 30 and 35 cents for a full year's growth.

**A FAIRY STORY.**—Considerable amusement was caused by an article taken from a stock journal, stating that a newly-born kid had very fine silky hair. No one present had ever seen such a kid; even the best are born with a covering of very coarse hair, which gives place to the finer fleece when the kid reaches the age of two months.

**REGISTRATION.**—The matter of the registration of Angora goats was brought before the meeting and a lively discussion ensued. Every one present was in favor of registering his goats, but the manner and method was not so easily decided upon.

The Kansas City method of registration was discussed. It was stated that they claimed to have registered 2500 goats; that a committee from their association would go into a flock, select the goats offered for registration, and, if they were desirable, register them, the goat thereafter remaining a registered animal.

The South African Association is much more careful. The animals offered have to be examined for three successive years; and if, after three different tests, they still reach the standard, they are accepted as eligible for registration. It was the unanimous opinion of those assembled that the South African method was the correct way to register Angora goats and that, until some such register was adopted here, the members of the California Angora Goat Breeders' Association would not register their goats.

President Bailey stated that he had kept a flock

register of his thoroughbreds for his own convenience and had found it a great help to him in noting the effect of crossing the different strains in his flock.

**IMPORTATIONS.**—The question of the importation of new blood to this country was then taken up. Mr. Wimmer stated that he had authorized Mr. Bliss, who was sojourning near Constantinople, to select him a Turkish buck at a cost not exceeding \$500. In case Mr. Bliss succeeds in getting a buck out of the country there will be more attempts to obtain stock from Turkey.

Mr. Wright spoke highly of the African importations, and stated that he believed there were goats in California fully equal to or better than the Turkish goats.

**ELECTION OF OFFICERS.**—The election of officers for the ensuing year resulted as follows: President, C. P. Bailey; vice-president, T. H. Harlau; corresponding secretary, W. W. Wright; treasurer, J. M. Wimmer; secretary, C. E. Bailey.

C. E. BAILEY, Secretary.

400 North Fourth street, San Jose, Cal.

Humboldt Stock Farm, Lovelocks, Nevada.

(Continued from page 193.)

ciety, 1 gold medal; and in 1899, California State Agricultural Society, special gold medal for meritorious exhibition of Shorthorn cattle. At the California State Fair, 1900, there was on exhibition 22 head of Shorthorn cattle registered. Following are their names:

**BULLS.**—Sharon Victor 6th, 3 years old; Noxubee Duke, 2 years old; Nevada Boy 23rd, 1 year old; Silver Knight 86th, calf; Nevada Boy 29th, calf; Humboldt Victor, calf; Nevada Boy 34th, calf; Nevada Boy 35th, calf; Nevada Boy 36th, calf.

**Cows.**—Duchess of Humboldt 8th, 7 years old; Lady Elgin 4th, 5 years old; Waterfall 2nd, 7 years old; Humboldt Rose 3rd, 7 years old; Sharon Rose of Maple Hill, 3 years old; Beauty H. 2nd, 2 years old; Amelia B. 11th, 2 years old; Humboldt Maude 6th, 1 year old; Humboldt Mary 12th, 1 year old; Duchess of Humboldt 32nd, calf; Amelia B. David 16th, calf; Amelia B. David 17th, calf; Redbud 16th, calf.

The above-named herd of Shorthorns were awarded every premium in which they contested, and that included for all premiums offered, except three in class.

They received first premium as the best herd of thoroughbred cattle; first premium as best young thoroughbred cattle; sweepstakes for best bull any age, and also sweepstakes for best cow any age; grand sweepstakes for 3-year-old cow, and grand sweepstakes for heifer calf. Part of this herd consisted of five head of Herefords selected from a herd of sixty now on the Humboldt Stock Farm, Mr. Marzen having commenced breeding Herefords in 1897. The names of the cattle shown in this class are as follows:

**BULL.**—Artisan, 2 years old.

**Cows.**—Modesty, Spring Time, Lady Fern and Miss Purple 3rd.

This herd of Herefords are from the most noted strains of blood, among which are Lord Wilkin, The Grove 3rd, Free Lance and other prominent strains of Hereford blood. The bull Artisan was awarded first premium and grand sweepstakes as the best 2-year-old Hereford bull.

The Humboldt Stock Farm of Shorthorn cattle and the herd of Herefords combined were awarded a gold medal by the State Agricultural Society of California, 1900, for the most meritorious exhibit of livestock other than horses. Mr. Marzen's cattle have always been noted for their excellent qualities; but his environment and advantages for breeding stock has been strengthened by sparing no pains and shirking at no cost to get the best animals that could be had in the world. In addition to his herd of thoroughbred Shorthorns and Herefords, he follows the practice of feeding a thousand head each year for beef cattle. Our artist has been quite successful in procuring good pictures of the animals of this herd shown at the State Fair, all of whom were awarded first premium in grand sweepstakes.

It is expected that these herds of cattle will be shown at the Tanforan Fair, in San Mateo county, this week, and any one interested in breeding fine cattle would do well to see these herds. While the herds of cattle from the sister State of Nevada have carried off many of the honors at our annual exhibitions thus far, it should not excite envy or regret, as with their advantages and skillful breeding they will stimulate other stockmen to improve their herds in every portion of the Pacific coast.

TO TEMPORARILY stop small leaks in seams of boilers or pipes, mix equal parts of air-slaked lime and fine sand with finely powdered litharge, in parts equal to both the lime and sand. Keep powder dry in a bottle or covered box. When wanted, mix as much as needed to a paste with boiled linseed oil and apply quickly, as it soon hardens.

ABSOLUTE ZERO is understood to mean a temperature so low that there would be no heat present. It is indicated at 460°.

GARMENTS made of textile fabrics, if dipped in a 25% solution of phosphate of ammonia, are rendered unflammable.



## Agricultural Review.

### ALAMEDA.

**GOOD PRICES FOR GRAPES.**—Niles Herald, Sept. 21: The winemakers will be busy in this township for the next two months. Grau & Werner of Irvington inaugurated the season last week Wednesday, while the Palmdale and C. C. McIver began operations this week. The price of grapes is somewhat uncertain. The local buyers only offered \$14 to begin with, but Stockton sent out men who offered \$17 for black and \$20 for white grapes, delivered in bulk on board the cars at the nearest station. This strengthened the market and a number of sales at \$20 per ton for black grapes have been reported. E. P. Werner, of Grau & Werner, estimates that there are about 1600 acres of grapes in the township and that the average yield will be three tons to the acre. The average yield of wine is about 155 gallons to the ton of grapes, and the output this year will be about 400,000 gallons, from which the maker gets from 14 cents to 16 cents per gallon laid down in San Francisco. The freight, tare and return charges deducted, leaves about 12½ cents per gallon net.

### COLUSA.

**COLUSA FRUIT PACKING HOUSE.**—Colusa Sun: Wednesday, Sept. 19th, was an eventful day for Colusa, the dried fruit packing house making its start and handling at the very beginning twelve tons of fruit, and more arriving hourly. The grading, of course, coming first, the day was a busy one in that line. A grader occupies a floor raised about 14 feet above the ground floor of the large brick building, corner of Seventh and Market streets. The grader is 30 feet long and the fruit is carried from below by an elevator worked by bands and pulleys, the power being an 8 H. P. engine with an 18 H. P. boiler. The fuel is coal. The great barrows under the slips were receiving the French prunes from the Brentwood orchard of J. B. DeJarnett. The prunes are graded in eight parts, then weighed and registered. They are then put into openings on the floor and let pass into large bins below, each grade being kept separate. From these bins they will be taken for boxing. The sixth and seventh grades weighed, respectively, fifty-four and fifty-two prunes to the pound, and the eighth grade only required forty-four to the pound.

### FRESNO.

**THE ORANGE OUTLOOK.**—Sanger Herald, Sept. 22: The orange crop on Kings river this year is remarkably fine, there being a large increase in the yield, and the size is uniform, to that the loss in grading will be very slight. The shipments from Sanger will undoubtedly exceed 100 carloads, as against 75 carloads last year. In fact the Kings river orange groves are going to surprise even our own people this year when the crop is off and the carloads counted. Old orchards have good crops and some new ones are bearing for the first time. Sixty thousand dollars or more coming in for Thanksgiving oranges will be a good thing for Christmas trade in our town. This fruit is generally shipped on commission, the packers receiving 45 cents per box. The lemon crop is the largest known here, and will materially add to the above estimate.

### KERN.

**ANOTHER NEW PEACH.**—Bakersfield Californian: Col. L. W. Burr has grown a new Freestone peach that promises to become famous. It is a seedling and the fruit is large and shapely. The meat is white and very juicy, and the flavor delicious. A valuable feature of the new peach is that it ripens at a time when other varieties are out of market. Col. Burr has named the peach the "Heredity."

### KINGS.

**DISEASED CATTLE FOUND.**—Hanford Journal, Sept. 18: During the past few months a large number of cattle from the various herds in this county have died from a disease known as blackleg, while others have been affected with Texas fever. Dr. F. E. Twining, the bacteriologist of Fresno, and Veterinary Surgeon Frank Griffith went out on a tour of inspection to the various dairy ranches in the vicinity of Hanford to find out if there were any cattle affected with the diseases and to notice the effect vaccination had on the cattle. During their inspection, several herds were found that were affected with Texas fever ticks, blackleg and apthia, a disease of the foot and mouth. But in no case where vaccine had been used were the cattle affected; accordingly the doctor advised all the owners of affected herds to vaccinate the cattle at once.

### LOS ANGELES.

**A NEW ORANGE.**—A Los Angeles paper reports that A. C. Thompson, the well-

known fruit grower of Duarte, has propagated a new and exceptionally choice seedless orange. The new orange is called the Navelencia. It is, as suggested by its name, a cross between the common Washington navel orange and the late Valencia species of the fruit. The new orange, it is believed, will supply a late orange that will be ready for shipment at a time when the markets are at their best, at least so far as prices are concerned. The Navelencia will reach its fullest maturity about June 1, and is expected to fill a long-felt want in the Eastern market. In shape the orange is not quite as oblong as the Valencia late, but it is fully as large, smoother skinned and has an excellent flavor.

### ORANGE.

**FINE GRAPES.**—Anaheim Gazette: Mr. Neff has placed us under obligations for several bunches of grapes of the Thompson seedless variety grown on his ranch near town. Two of the bunches weigh five and a half pounds. One is 14 inches in length the other 13 inches. The largest bunch of Thompson seedless Mr. Neff ever heard of measured 15 inches. The grapes are firm and luscious.

### SAN DIEGO.

**EXCELLENT FODDER WITHOUT IRRIGATION.**—National City Recorder: A fine specimen of Australian salt bush, which is reported excellent fodder for cattle, is on exhibition at the San Diego Chamber of Commerce. It was grown without irrigation on the Otay mesa by J. V. Tavan.

### SAN JOAQUIN.

**LEATHER FOR GERMANY.**—Stockton Mail: The Wagner Leather Company of this city has received an order from a firm in Germany for \$1000 worth of fine leather for shoes. The order is believed to be the direct result of the exhibition the company made at the Paris Exposition. The company proposes to establish a plant in the woods of the counties where tanbark is secured, a plant for grinding it and extracting the tannin from the bark. The fluid will be shipped to the tannery, thus saving large freight bills. The plant will cost about \$20,000.

### SAN LUIS OBISPO.

**SALE OF LARGE RANCH.**—Paso Robles Record: Recently there was filed for record a deed from John H. Wise to Henry Brunner, both of San Francisco, of the Sacramento ranch in the Shandon section, containing 29,217.80 acres, for the sum of \$135,000, subject to a mortgage of \$100,000 held by the German Savings Bank of San Francisco. Jacob Hege of the Burnett ranch, near Estrella, has been placed in charge as manager, and all old tenants have renewed contracts for the coming year, except Mr. Lybeck, who has gone north, and whose place has been let to R. Leisy & Co. Messrs. Wreden & Walsh have leased the feed on the ranch and now have about 5000 head of cattle feeding on the rich lands of the ranch. The above sale will no doubt tend to aid in the further development of this part of San Luis Obispo county.

### SANTA BARBARA.

**LIMA BEAN CROP.**—Lompoc Record, Sept. 22: The bean crop in and about Carpinteria is fairly good, fully up to half a crop, which with the good prices prevailing will leave producers a fair margin of profit. Through parts of Ventura—about Montalvo, El Rio, Oxnard and Hueneme—the Lima bean crop is good, and at many points a full crop. A few miles inland from the sea the crops are nothing to speak of, none of them paying cost of production unless favored with irrigation.

**SHORT FEED.**—Lompoc Record, Sept. 22: The feed on the ranges where there is any amount of stock is vanishing very fast, proving how great was the lack of moisture to produce and sustain the usual abundance. Only on the San Julian ranch do we find anything like good feed and fairly good crops, for there the rainfall came nearly up to the average annual fall for thirty years. The mustard, bean, corn, potato and barley crops on the San Julian ranch, put in and superintended by William Begg, are up to the yield of average years, and show what practical farming will bring forth.

### SANTA CLARA.

**PRUNE ORDERS NUMEROUS.**—San Jose Mercury, Sept. 23: If it is warm weather the prune growers want they have no reason to complain. Yesterday the thermometer registered 78° at 10 A. M.; 85° at noon and 95° at 3 P. M., being 19° higher than it was on Saturday of the week previous. If this weather, or moderately warm weather, continues during the coming week, the prunes will be pretty well cleaned up. The growers are all so busy at picking and curing that many of them do not find time to haul in their fruit to

the association warehouses, and as orders for prunes are coming in rapidly from the trade, the association and the packers would be glad to have more prunes on hand for shipment. The demand exceeds that of any previous year before October. As grading proceeds the quality of the crop is improving. Prices remain the same. It is reported that one of the large outside packing firms has been compelled to withdraw its prices from the market because of its inability to fill orders. If this be true it means that the association of prune growers absolutely control the situation, a fact attested by the numerous orders from the Eastern trade. Concerning the Oregon crop the Oregonian recently said: "Prune growers are anxious about the results that may follow the rains. The fruit has begun to crack badly, and as the orchards are muddy picking is slow. Brown rot affects the fruit which is left too long on the ground. It is feared that if hot weather should follow the rain, the latter part of the drying would come with such a rush that the driers would not be able to handle the fruit fast enough. The market for Italian prunes continues to improve, although it started in at a fair figure. Italian prunes are now worth 5 cents net for 30-40s in bags. This is equal to 5½ cents, with the usual commission off. The prices set by the Willamette Valley Prune Association was at the rate of 5½ cents for 30-40s in bags, but the expenses of the association come out of this."

### SOLANO.

**FRUIT NOTES.**—Vacaville Reporter: The output of dried pears this season will be from eight to ten carloads. This is held mostly in small lots. Sales of prunes have been made as low as 2-cent basis. Other sales have been made at 2½ cents. There have been about sixty carloads of prunes sold up to the present time, leaving in hands of growers from 140 to 150 carloads. The dried apricot output of Vacaville this season will be close to 125 carloads, most of which has been sold. The valley will produce about sixty carloads of dried peaches this season. Two-thirds of this is in the hands of dealers. Early estimates of the prune product of Vacaville were too low. It will be fully 175 carloads, and some estimate the crop as high as 200 carloads.

### SONOMA.

**HOP AND GRAPE PICKING.**—Correspondence Santa Rosa Press-Democrat, Sept. 22: "The hand of the diligent maketh rich." The above quotation was never more fully exemplified in the annals of human industry than in the hop picker's experience. The degree of proficiency varies among hop pickers in this county as much as in cotton picking in the South. Young men and women outstrip the older people and the juveniles, as a rule, in the race to secure the largest number of pounds of hops. In all yards the hops have ripened unevenly, and the fields will have to be culled for the ripest two or three times before the gathering of the crop is completed. Because grapes and hops have ripened simultaneously this year, vineyard owners have advanced the price offered to grape pickers considerably. Some are paying \$1.50 per ton; but as long as the hops remain in any degree good it will be rather difficult to induce people to leave the hop fields for the vineyards. Hops dry slower than usual in the kilns this year, because a large proportion of them are quite green. The cured product when piled up looks and is perfect in quality and desired condition. In most instances the low pole yards are yielding the best this season, though why this should be so the most experienced can not tell.

**FINE WINE.**—Sonoma Index-Tribune, Sept. 22: Wine making is now in full swing in this valley. So far the weather has been more than favorable for the vineyardist, and Sonoma valley's 1900 vintage will surpass that of former years in bouquet. The quantity, however, owing to the decreased vineyard acreage, will not be one-third of what it was ten years ago.

**A NEW APPLE.**—Santa Rosa Republican: The samples of apples received at this office from T. J. True are of a new variety. They are called the Morris Red, and are supposed to have originated from the seed of a Jonathan. Mr. True says that the trees from which the apples were taken have borne for six years in succession without a failure. The apples are of good color and excellent flavor, and can not help selling well. The trees resemble the Jonathan in appearance, and are of a slender but vigorous growth. They do not grow quite so large as the Gravenstein or some of the other strongest growers. They bear well, however, and are a great success.

**GROWING FILBERTS.**—Sebastopol Times: H. C. Markham is the only person in Analy township who is extensively en-

gaged in nut raising. On his ranch, 1½ miles northwest of Sebastopol, he harvested about a ton of fine filberts this year. He has three acres of nut trees, though only a portion of the acreage is in bearing. The nuts are of good size and sell readily. Mr. Markham's farm comprises nearly forty acres and is one of the finest places in western Sonoma county. It is all under a high state of cultivation, about fifteen acres being in grapes and the balance in fruit and nuts.

**MANY CALVES DIE.**—Santa Rosa Press-Democrat, Sept. 18: Veterinary Surgeon J. J. Summerfield reports at present time a great mortality among calves, owing to an outbreak of the disease known as black leg. The disease-stricken district extends from Sebastopol to Cotati. On one ranch, out of twenty-two calves twelve died, while on another ranch nine died out of a herd of sixteen. The doctor has been kept quite busy vaccinating calves as a preventive against the disease.

### TEHAMA.

**LARGE FRUIT CROPS.**—Red Bluff News: Manton this year will have an immense apple crop and will also add a large portion to the Tehama county prune crop. It is estimated that Wheel Hazen will have from sixty to seventy-five tons of prunes, J. L. Barham twenty-five tons, H. H. Wiendieck fifteen to eighteen tons, Myron Yager ten tons, William Dines four tons, and W. H. Gransbury will also have a good crop. Messrs. Hazen, Gransbury and Graham will each have a large yield of apples.

**PRUNES NOT DRYING.**—Red Bluff People's Cause, Sept. 22: Wm. Perry was down from the Bend to-day. He says very slow progress is being made in drying prunes. He had his 3000 trays filled, and, unless he could dry them, he did not know how he would dispose of the remainder of his crop. Prunes are placed in single layers on the trays until they get about half dry, when they are doubled up; in this way trays can be had to work with. But so far this season drying has been so slow that this method could not be resorted to, and the trays of the prune growers are about all in use.

### TULARE.

**THE ORANGE OUTLOOK.**—Porterville Enterprise, Sept. 21: Two hundred and fifty cars is the lowest estimate for this coming season's output of oranges from Porterville. Never before has the prospect for a good orange crop been so propitious. A magnificent year, with frost as an unknown quantity, with a better chance for irrigation, is the cause. Not only will the output be early, but earlier than ever before. About the middle of October it is expected that packing and shipping will commence, as already the Navels are showing signs of commencing to color. There is no doubt but that the Porterville citrus district holds the palm for early oranges. The proof of the pudding is in the eating. Porterville has always been first in her shipments on the market. The oranges this season will be of fine size and good quality, and when they arrive in the East will take precedence over any that may come in contact with them. Lemons from Porterville are already on the market and shipping has been going on for the last month or two. They are of fine variety and are bringing good prices.

**MARKETING FRUIT.**—Tulare Register: A Tulare fruit grower, who expresses confidence that the fruit market will be all right yet, sees danger in an undue haste to get into the market. This, he thinks, will tend to depress prices and make the market slow. There are not too many peaches, nor reason why prices should not be good. There has not been heavy selling. The larger part of the crop and the best fruit is yet in the hands of growers. If they can maintain their patience awhile, it will work out all right. Last year 6 cents was paid for the last of the crop after the bulk of it had gone for less. Don't try to force things; don't try to unload upon an unwilling market.

### YOLO.

**WOODLAND CREAMERY.**—Woodland Democrat: Over 100 farmers around Woodland, who supply milk, and the entire town of Woodland realize the benefit of the creamery. Just about one-half the patrons supply under 100 pounds of milk and six over 500 pounds. The tendency is to increase the alfalfa acreage and number of cows, but progress is made slowly. Wheat growing, with its long period of rest between crops, has spoiled many a farmer, and he does not take kindly to the early and late hours with the milk-pail. The creamery has a separating station at Yolo, a few miles north on the railroad, with thirty-five patrons. The entire supply of milk is now about 20,000 pounds daily, and from 800 to 1000 pounds of butter are made daily during the year, mostly marketed in Sacramento.



## THE HOME CIRCLE.

### An Afternoon Tea.

At afternoon tea, and alone, for a wonder!  
The quaint little table invitingly drawn  
Where the shadows lay cool, and sunlight  
crept under  
The low-growing beeches that sheltered  
the lawn;  
In a dainty white gown, and hat large  
and shady,  
Half hiding the face I was wishful to see,  
More radiant than summer she sat—my  
fair lady—  
At afternoon tea.

Far off in the pleasure a fountain was  
singing,  
And tossing its silver high over the  
trees;  
The wood birds were glad, and the jas-  
mine was flinging  
With prodigal haste its white stars to  
the breeze;  
While above the blue china we bent, and  
grew merry  
O'er topics on which two can always  
agree,  
Mere gossip, of course, but enjoyable—  
very—  
At afternoon tea.

Then the cream was poured in and the  
sugar was stirred;  
"Was the fragrant infusion too strong  
or too weak?"  
She asked; and in answer I whispered a  
word  
Which brought the swift rose to her  
delicate cheek;  
Her eyes found a refuge beneath their  
long fringes,  
But she did not say nay to my passion-  
ate plea.  
Oh, the gate of Love's Eden swung back  
on gold hinges  
At afternoon tea.

And we had such sweet secrets to tell to  
each other  
That it might have been sunset, or  
moonrise, or dawn,  
Till we chanced to look up and encoun-  
tered her mother  
Come softly upon us across the soft  
lawn—  
Come softly upon us, unruffled and stately,  
With a questioning glance at her daugh-  
ter and me,  
Which changed to a smile as I handed  
sedately  
Her afternoon tea.

Ah, love! it is years since we lingered to-  
gether  
Below the green bows in the glory of  
June,  
With hopes that were bright as the sun-  
shiny weather,  
And hearts beating time to one old-  
fashioned tune;  
But I know our joint lives are with hap-  
piness laden,  
As I tell the small fairy enthroned on  
my knee  
How "Mother" was won, when a beauti-  
ful maiden,  
At afternoon tea.

—Chambers' Journal.

### A Culinary Pedigree.

"Aunt Clementine, were you always  
a cook?"  
"Why co'se, honey. I an' all my  
fo'gentors, 's fah as I knows 'em."  
Aunt Clementine and her "fo'gen-  
tors" had been possessions of my grand-  
father's family ever since they had  
been established in "the valley" by  
the gracious act of the English sov-  
ereign, and not one of the race had ever  
or would ever be sold. Believing in the  
injustice of unwilling servitude, my  
great-grandfather had manumitted all  
his slaves long before the blare of  
Yankee bugles proclaimed a new order  
of things for the black people, but the  
old "hands" could not be induced to  
desert the old home or their master's  
interests, and remained on the place,  
true, tried and trusted to the last.  
Aunt Clementine was very old and a  
privileged character. We children al-  
ways went to her when in trouble, when  
we sought amusement, and especially  
when hunger prompted an earlier visit  
than etiquette might have demanded.  
On the question of her age, she was  
very indefinite, always saying, "spees  
I's mos' a hundred," and this was  
borne out by the family records. Her  
stories were always personal, and while  
somewhat shy of chronology or possibly  
fact, were interesting to us on account  
of the charm of the personality, plus

her cookies. On this occasion she knew  
from the opening that I expected a  
story, and if not already prepared  
with one in her own experience soon  
had her incidents well enough in hand  
to give color of fact to the narrative in  
which in my childish inexperience I  
failed to detect any but the most glaring  
inaccuracies.

"Tell me about the cooking of some  
of your, your—what-you-call-ems."  
"My fo'gentors," and the good old  
woman swelled with the pride of an  
ability to "git off one o' them big  
words lil' chillen caynt und'stan'."

"Well, who was the first of them  
that you know of as cooking?"

"Laws, honey! That was way back  
thar. Long 'foh your granpa's bo'n.  
It was this way. When Mistah Isaacs,  
him whut Abraham was gwine stick a  
knife inter when he was a lil' boy an' a  
goat in de briar patch holler out, 'Ab-  
raham! You Abraham! You stop dar.  
Ise de Lohd, an' Ise sas'fied. You drap  
dat knife and let Isaac go. I'm comin'  
dar foh to be a sac'fice.' Well—"

"Aunt Clementine, did Isaac's pa  
really mean to stick a knife in his little  
son?"

"Yes sah! Deed he did. But you  
musn't 'trupt if you want to heah  
'bout de cookin'."

Muttering that I couldn't see what  
he would want to kill his boy for I  
agreed not to interrupt any more, and  
asked her to go on.

"Well, as Ise a sayin', Isaac growed  
up to be a man, an' went off into the  
nex' county an' co'ted a gal name Re-  
becca; an' bime bye he married her,  
an' when she went home with Isaac she  
took all her han's with her, 'specially  
de cook an' de housemaid. An' that cook  
was de fo'gentor I done tol' you 'bout  
befo'. Dey had two chillun, one name  
Jacob—he's de one yo' gran'pa read  
'bout in de good book what made a big,  
big ladder reachin' clar up in de sky—"

"Is that true, Aunt Clementine?"

"True? Why chile; ain't it done  
writ in de good book? Wha's yo'  
larnin'? Dar was Jacob an' his bre'r  
Esau, a mean, hairy lil' scamp, but he  
was de fus' bo'n an' 'titled to de best  
on de place. But Mrs. Isaac allus had  
a kind o' hankerin' an' a leanin' to-  
wards Jacob as de bes' one, an' when  
pa Isaac tol' Esau to git his bow 'n  
ar'r an' go out in de woods lot an' git  
a deer an' fotch him some venison meat  
for a stew, Esau started off to go ino  
de woods lot, an' as he's likely to be  
gone fo' some lil' time, his ma up an'  
tol' Jake to go out an' fotch in a couple  
o' kids. Now Cindy was the cook an'  
she was a pow'ful good one at fixin' up  
things; so Mis' Becky tol' her to take  
de kids an' fix 'em up in a stew so's  
dey taste like the ven'son.

"Laws honey; yo' Aunt Cindy did'n't  
know nothin' 'bout de goin's on in de big  
house. She persided in de kitchen  
wha she b'longed.

"Fus', she tuk de kid meat an'  
chop it up in bits; then she tuk some  
spices Mis' Becky done brought f'm a  
Jew pedlar the week befo', an' she put  
'em all in a pot an' bile an' stew, an'  
stew 'em till they's pufteckly tender,  
an' you couldn't a tole 'em f'm ven'son  
meat to save yo' neck."

"Huh! Bet I could."

"Whut I tole you 'bout 'truptin',  
hey?"

"All right, aunty; go on."

"My, but that stew was pow'ful  
good. Nobody could a tol' it f'm ven'son  
meat." Here a sharp glance in my  
direction, but I was mute.

"Mis' Becky she dress Jake up in  
the clothes whut Esau done wore to  
meetin's on Sunday, 'n kyivered his  
han's an' the scruff o' his neck with  
pieces o' kid'skin, an' tol' him, 'take  
that into you's pa an' tend like you's  
Esau. Now don't you fo'git, you's  
Esau.'"

"Couldn't Isaac tell the difference  
between his boys; was they twins?"

"Why, bress yo' honey. Isaac's  
as blind as a bat, an' when Jake brung  
the stew in an' tol' him, 'Ise Esau,  
he's pa pow'ful glad to know he's git  
back so soon, 'specially as that stew  
smell pow'ful good. An, he tuk an' eat  
all that stew up, ev'y mite an' passel  
an' nevah lef' a scrap fo' none o' the  
res' o' the fam'ly, an' Jake a standin'  
by with his mouth a waterin' like a

houn' pups, 'cause he knowed what  
kind o' stew Aunt Cindy could make.  
When Isaac's got through, he says to  
Jake, 'come huh boy, I'se gwine bless  
you, sho'. An' Jake fooled his pa puf-  
teckly, an' knolt down an' got dat  
blessin' whut b'long to Esau.

"Bime by, Esau come in fr'm the  
woods lot with a saddle o' ven'son  
'cross his shoulders, an' makin' straight  
fur the kitchen, said: 'Here, Aunt  
Cindy,' says he, 'I wont yo' to make  
one o' yo' bes' stews outen that ven'-  
son; I'm gwine give my pa a treat;'  
an' he flung it down on the kitchen  
table an' walked out fo' she culd say a  
word. 'Huh,' said Aunt Cindy, 'seem  
to me yo' boys gittin' mighty fond o'  
yo' pa. Reckon he'll git 'nuff o' ven'son  
foh one day.' But she fixed up the  
stew all right, tho' it was'n't tricked  
out like Jacob's, 'cause she was Mis'  
Becky's niggah, an' anybody whut Mis'  
Becky liked she boun' to like too."

"Did Isaac eat it too?" I eagerly  
asked.

"He knowed something wrong soon's  
he smell that stew. He knowed yo'  
Aunt Cindy make dat stew, fr'm de  
smell of it, but he couldn't just at fust  
see whut dey was bringin' in 'nuther  
for, an' he up an' as't; 'who's dat  
bringin' in mo' ven'son stew?' An'  
Esau answered him: 'It's me pa; Ise  
Esau, whut you done sent to the  
woods pasture a'ter some ven'son?'  
Then Isaac knowed some trick was up,  
an' he tol' Esau he done guv his blessin'  
to Jacob, an' Esau he up an' howled  
right on de spot: 'Ise cheated. Ise  
a notion to throw de ven'son out to de  
pups.' But then he knowed his pa not to  
blame none, an' he wanted some o' dat  
stew hisself, so he tol' his pa to eat it  
any how and give him some blessin'  
too."

"Well, but Aunt Clementine; I  
thought you told me Aunt Cindy was in  
the exodus?"

"So I did, honey. But that was the  
gran'chile of something or other to  
this huah Cindy. They's been lots o'  
Cindy's in our fam'ly."

"Was the one in the exodus a cook  
too?"

"Why, cose she was. She done cook  
fo' the Moses fam'ly."

"Were they kin to the Isaac's  
family?"

"How ig'nant you is chile. Why  
don't you read yo' good book?"

Being sat upon, I subsided and mildly  
asked what they had to cook during  
the exodus.

"Now yo' ig'nance is up'mos' agin.  
Yo' spouse they live fohty yehs on  
air?"

I admitted the improbability, when  
Aunt Clementine started off in a rem-  
iniscent vein, as though relating a per-  
sonal experience.

"We didn't starve. No 'deed. I  
members one mohnin' gittin' up 'bout  
sunrise, an' my feet was pow'-  
ful sore, an' as Ise a goin' to the crick  
to bathe 'em, I noticed a sort o' a cloud  
ovah in the west, an' befo' I could git  
back to the kitchen tent that cloud was  
ovahhead, an' begun to rain down bush-  
els o' patridges an' they was that fat  
they jus' bus' wide open when they hit  
the yeath. Um, you nevah tas'ed such  
stew as we had that mohnin'."

"Well, but aunty, you was not an  
exoduster."

"Oh, go long off you boy. Yo'  
ma's been callin' you foh ten minits."  
—Charles Hite-Smith in American  
Kitchen Magazine.

### Self-Confidence.

Self-confidence without self-reliance  
is as useless as a cooking recipe with-  
out food. Self-confidence sees the pos-  
sibilities of the individual; self-reliance  
realizes them. Self-confidence sees the  
angel in the unhewn block of marble;  
self-reliance carves it out.

Life is an individual problem that  
man must solve for himself. Nature  
accepts no vicarious sacrifice, no vica-  
rious service. Nature never recognizes  
a proxy vote. She has nothing to do  
with the middleman—she deals only  
with the individual. Nature is con-  
stantly seeking to show man that he is  
his own best friend or his own worst  
enemy. Nature gives man the option  
of which he will be to himself. All

the athletic exercises in the world are  
of no value to the individual unless  
he compel those bars and dumbbells to  
yield to him, in strength and muscle,  
the power for which he himself pays in  
time and effort. He cannot develop his  
muscles by sending his valet to a gym-  
nasium.

The medicine chests of the world are  
powerless in all their united efforts to  
help the individual until he reaches out  
and takes for himself what is needed  
for his individual weakness.

All the religions in the world are but  
speculations in morals, mere theories  
of salvation, until the individual real-  
izes that he must save himself by rely-  
ing on the law of truth, as he sees it,  
and living his life in harmony with it as  
fully as he can. But religion is not a  
Pullman car, with soft-cushioned seats,  
where he has but to pay for his ticket  
and some one else does all the rest. In  
religion, as in all other great things,  
he is ever thrown back on his self-reli-  
ance. He should accept all helps, but  
he must live his own life. He should  
not feel that he is a mere passenger;  
he is the engineer, and the train is his  
life. We must rely on ourselves or we  
merely drift through existence—losing  
all that is best, all that is greatest, all  
that is divine.

The man who is not self-reliant is  
weak, hesitating and doubting in all he  
does. He fears to take a decisive step,  
because he dreads failure, because he  
is waiting for some one to advise him,  
or because he dare not act in accord-  
ance with his own best judgment. In  
his cowardice and his conceit he sees all  
his non-success due to others. He is  
"not appreciated," "not recognized,"  
he is "kept down." He feels that  
"society is conspiring against him."  
He grows almost vain as he thinks no  
one has had such poverty, such sorrow,  
such affliction, such failure as have  
come to him.

The man who is self-reliant seeks  
ever to discover and conquer the weak-  
ness within him that keeps him from  
the attainment of what he holds dear-  
est; he seeks within himself the power  
to battle against all outside influences.  
He never stupefies his energies by the  
narcotic of excuses for inactivity. He  
realizes that all the greatest men in  
history, in every phase of human effort,  
have been those who have had to fight  
against the odds of sickness, suffering,  
sorrow. To him defeat is no more than  
passing through a tunnel is to a trav-  
eler—he knows he must emerge again  
into the sunlight.

Man to be great must be self-reliant.  
Though he may not be self-reliant in all  
things, he must be self-reliant in the  
one thing in which he would be great.  
This self-reliance is not the self-suffi-  
ciency of conceit. It is daring to stand  
alone. Be an oak, not a vine. Be  
ready to give support, but do not  
crave it; do not be dependent upon it.  
To develop your self-reliance you must  
see from the very beginning that life is  
a battle you must fight for yourself—  
you must be your own soldier. You  
cannot buy a substitute, you cannot  
win a reprieve, you can never be placed  
on the retired list. The retired life is  
death. The world is busy with its own  
cares, sorrows and joys, and pays little  
heed to you. There is but one great  
password to success—self-reliance.

The man who is self-reliant does not  
live in the shadow of some one else's  
greatness; he thinks for himself, de-  
pends on himself and acts for himself.  
In throwing the individual thus back  
upon himself it is not shutting his eyes  
to the stimulus and light and new life  
that come with the warm pressure of  
the hand, the kindly word and the sin-  
cere expressions of true friendship.  
True friendship is rare. Its great value  
is in a crisis—like a lifeboat. Many a  
boasted friend has proved a leaking,  
worthless "lifeboat" when the storm  
of adversity might make him useful. In  
these great crises of life man is strong  
only as he is strong from within, and  
the more he depends upon himself the  
stronger will he become and the more  
able will he be to help others in the  
hour of their need. His very life will  
be a help and a strength to others, as  
he becomes to them a living lesson of  
the dignity of self-reliance.—Saturday  
Evening Post.



### Bachelor Ladies.

Here is a story which perhaps is old, But still has point enough to be retold. A maiden lady, prim and sharp of tongue, Bearing her load of cares, no longer young, Went to a party where some rustic blade Thought it fine sport to "jolly an old maid." "Tell me," he said, "why a smart girl like you Never got married?" She just looked him through Over her glasses and made this reply: "What do I need a man for, sir, when I Have a tame parrot that can curse and swear As hard as any man, and eat his share? I have a monkey, too—he surely can Chew his tobacco just like any man. As for the rest of married women's rights, I have a cat that always stays out nights."

### Nobleness.

I count this thing to be grandly true, That a noble deed is a step toward God, Lifting the soul from the common clod To a purer air and a broader view. We rise by the things that are under our feet; By what we have mastered of good or gain; By the pride deposed and the passion slain, And the vanquished ills that we hourly meet. —Exchange.

### The Art of Entertaining.

The house itself may be helpful in making visitors feel at home. We should have nothing too fine for comfort, and welcome our friends in rooms made homelike by our daily use. It is well to have easy rules about breakfast. It is customary to give one's guest the option of having tea or coffee, rolls and fruit sent to their rooms, or of joining the family. No hostess apologizes for any guest. All are on the same social plane while under her roof, and should receive equal consideration. It is a disputed point whether host or guest should suggest retiring for the night. It relieves visitors of embarrassment to know the ways of the household, and a readiness to comply with them is a mark of politeness. It shows no lack of cordiality to refrain from urging friends to extend their visit. They probably have other pleasant plans, and a hostess may be asking a great favor when she fancies that she is conferring one. Experienced entertainers recommend that the men should generally spend their mornings together and women enjoy each other's society. All meet at luncheon. Hosts and guests meet in the drawing or living room before the meals. Not less than five nor more than fifteen minutes should be allowed for all to assemble. Every guest should be made to feel that his or her presence has added to the pleasure of the entertainment and conferred a personal gratification upon the hosts. A prompt expression of gratification in remembering the visit, at once, upon returning home, is an evidence of good breeding. A guest should hold sacred anything that may be learned of the family life or the peculiarities of any member of the household where hospitality has been accepted. Visitors should fall in readily with any plan proposed for their pleasure, showing a disposition to be easily amused and interested, but must not seem dependent for amusement.—Mrs. Burton Kingsland in Ladies' Home Journal.

### A Boy Who Will Succeed.

Down in Missouri lives a boy who likes pets. He began with a pair of pigeons that he got in trade for a dog that he had traded a knife for. His parents allowed him to keep the pigeons until they multiplied so that there were pigeons all over the place. Then he sold the pigeons and bought a goat that ate the clothes off the line every Monday. He was compelled to dispose of it, and traded it for a pair of game

chickens. In a week there wasn't a rooster left in the neighborhood; the game rooster had killed them all. His father took the game chickens for a ride one night and lost them 3 miles out in the country. Three days afterwards the boy brought them home, but he never told anyone how he got them. And so he fought for his pets one by one—his dog was lost, his lamb stolen, his rabbits ran away. He has come down to one old hen.

Recently he bought a "settin'" of eggs. A "settin'" of eggs is as many as a motherly hen can hatch into chicks. He had made up his mind that his hen was lonely and needed company, and what so companionable as a hatch of little chicks to scratch for? The hen, however, had different views, and didn't want to sit on the eggs. But he was not a boy to be stumped by a hen—he had borne too many losses already.

He put the eggs in a box in which he had made a nest of hay. Then he planted the indignant hen on them, put a board in which he had bored a lot of holes over her and left her to come to terms. That night his big brother kicked off the box and set the hen free. The next morning the boy put her back and put some bricks on the board, for he thought she had raised the board and released herself. The brother kicked both bricks and board off that night. The boy replaced hen and board again, and again they were kicked off. Then he got a board and made a hole in it for the hen to poke her head through and nailed the board to the box. Once a day he takes the board off and chases the hen around the yard for exercise, and twice a day he carries food and water to her.

What's the use of trying to discourage a boy like that?—Kansas City Star.

### True Hospitality.

Some of us are so situated that we cannot be hospitable in the common acceptance of the term. We have no homes where we may welcome friends and acquaintances. We look about us and see beautiful homes into which a guest rarely enters—large houses, perfectly adapted for entertaining, which remain closed to all but the home circle the whole year round; and we wonder why the large heart and the large house do not always go together. We grieve because we are denied the opportunity of being hospitable. But there is a sense in which the hospitable heart can manifest itself even without a house. We can be kind and generous to the opinions of those we meet—yes, even to their peculiarities and their weaknesses. We may not agree with their views, we may even feel that they are wrong or foolish, but nevertheless we can listen to that which deeply interests them; we can open our hearts to the confidences which it is a relief to them to give us. A young girl said, "It does me good to see Mr. Brown. He knows so much that I should be content just to listen to him; but somehow he always gets me to talking, and, what is more, he makes me feel as if he really enjoyed talking with me." Could she have better described a truly hospitably-minded person?—Exchange.

STONE walls do not a prison make,  
Nor iron bars a cage;  
Minds innocent and quiet take  
That for a hermitage;  
If I have freedom in my love,  
And in my soul am free,  
Angels alone that soar above  
Enjoy such liberty. —Lovelace.

Unripe cantaloupes may be converted into a sweet pickle like that made from watermelon rind, using the same receipt. Or, it may be spiced, as follows: Pare, scoop out the inside and all soft part, and cut into fancy shapes or squares; throw it into salt water over night. Next morning put it into clear boiling water and cook until tender; then to each pound of this put a half pound of sugar, a quarter of a cup of vinegar, a tablespoonful of mixed cold spices, and a teaspoonful of moistened ginger into a saucepan; when boiling throw in the melon rind, cook slowly until tender and turn out to cool.

## DOMESTIC ECONOMY.

### Hints to Housekeepers.

To remove spots from tan shoes or saddles rub lightly with a rag dipped in alcohol, then wash with soap and water, and finish with ordinary russet leather polish.

For every ten hours' use the sewing machine should be oiled thoroughly and all surplus oil carefully cleaned away. The machine when not in use should be unbanded, and the foot lifted from the feed. It should be run steadily, never started or stopped with a jerk.

To make a pie of cold beef, cook the meat in the same way as for a stew. When it is so tender as to fall apart, place it in a baking dish, cover with a rich biscuit paste and bake until the crust is done. This, too, should have plenty of sauce to serve with the crust.

For a luncheon, an excellent substitute for a sandwich is made by splitting a French roll lengthwise, removing the inside and filling the space with chicken or lobster salad. The salad should be garnished daintily, and the canoe-like receptacles served on a bed of grape leaves.

The girl should give care to the stockings she wears with low shoes and a short skirt. When she has black or tan shoes and a gray skirt and wears a pair of dark blue stockings she makes a line of demarkation which is noticeable, calls attention to her skirt, and seems to give it an inch or two of extra shortness that is not in good taste.

To make a delicious and pretty salad cut a thin slice from the stem end of a large, round tomato. Take out the pulp. Season it with a few drops of onion juice and finely chopped sweet, green pepper olives and celery. Fill each tomato with the mixture; put a teaspoonful of stiff mayonnaise on each. Decorate the mayonnaise with two or three thin strips of olives, placed skin side up. Set each tomato on a crisp lettuce leaf.

Rice passed through a coffee mill to remove the flavor of coffee before spices are ground is said to be better than bread crumbs for the same purpose. The rice may serve, too, after the spices, to restore the mill to its primary service, and this latter handful of rice, impregnated as it is with spices, will be found an excellent addition to soup. Many good cooks often throw in with rice, barley or vermicelli added to soup a clove or two and a couple of pepper-corns.

To wash colored stockings, make a strong lather of soap and soft water as hot as the hands can bear. After washing the stockings rinse in cold water, with a little salt thrown in to prevent the colors running. It is very necessary to wring as much water out as possible, and then wring again in a dry towel. The stockings must be dried immediately in the wind or before a fire, as long, cold drying is sure to make the colors run. Soap must not be rubbed on them, as this stains them.

### Domestic Hints.

CARAMEL ICE CREAM.—Caramel ice cream is delicious and comparatively easy to make. Put half a pound granulated sugar in an iron frying pan. Place over a hot fire, and stir till after melting and browning, it finally boils and smokes. Now turn it into one quart of boiling milk, stir over the fire a moment, and then pour the mixtures over half a pound of sugar. Let cool, then add one quart of rich cream and one tablespoonful of vanilla. Stir well till thoroughly mixed and then freeze. When well frozen, stir in one pint of whipped cream and pack according to previous directions.

SWEET PICKLED PEACHES.—Peel and halve the fruit. To four pounds of fruit allow one pound of sugar and a pint of vinegar, a tablespoonful of ground allspice, a teaspoonful of ground cinnamon, half a teaspoonful mace and half a nutmeg. Tie the spices in a muslin bag and put it in vinegar and sugar, which must be boiling before the

peaches are put in, and let them simmer until half cooked. Turn into a stone jar. The following day heat the liquor to the boiling point and turn over the fruit. Continue this for five days. On the fifth day put the peaches on with the liquor and simmer until tender. Put in glass jars and seal.

CANNING SWEET CORN.—To can sweet corn, select fine, fresh ears. Remove the husk and silk and carefully cut corn from cob. Pack into jars, pressing it down closely, and fill to overflowing. Put on the tops and screw them down. Place hay or straw in the bottom of a wash boiler, stand the jars on top of this, and pour into the boiler sufficient cold water to half cover the jars. Cover the boiler tightly and boil continuously for three hours, watching carefully that there is sufficient water to make a full volume of steam. When done lift out the jars and screw down the covers as tightly as possible. Stand aside to cool. When cold screw again, and keep in a dark, cool place.

### Recipes for Grapes.

GRAPE JELLY.—Grape jelly is not to be despised, either for Sunday night teas or for a cheap dessert. To make it, mash a pint of pickled grapes, pour a quart of boiling water over them, and let them stand till cold. Strain off the liquid, add to it half a packet of patent gelatine dissolved in as little water as possible, three cupfuls of sugar and the juice and rind of a lemon. Bring to a boil, skim, strain and set on ice until wanted. Serve in glass bowl, with or without whipped cream. For evening entertainments, the effect is much enhanced if the mound is garnished with fresh grape leaves and very small bunches wreathed about the base.

GRAPE DUMPLINGS.—For grape dumplings, roll the same crust into rounds, pinch the ends up in cup shape, place them around a pan, then fill them with stewed grapes and bake with sauce the same as the roll. For boiled roll or dumplings, make good puff paste, roll out and fill, then fasten securely in a floured cloth and steam for two hours, or plunge in full boiling water and keep boiling all the time. Sauce for boiled things ought to be very rich—all butter and sugar, with flavoring of wine or whiskey, nutmeg and lemon peel. Where spirits are not approved, grape juice or lemon juice can take the place. The sauce must not boil outright, but be mixed in an earthen vessel, over boiling water and stirred hard for at least ten minutes.

GRAPE ROLL.—Grape roll is a close second to the cobbler. Stew the picked grapes with half their own weight of sugar, and only water enough to save from scorching. Let them cool. For baked roll have a dough of two eggs, one cupful of milk, one-half cupful of lard or butter and one pint of sifted flour. It should be just stiff enough to roll. If too soft, work in more flour. Roll it out in long ovals; spread the upper surface of them thickly with grapes, roll up, pinch the ends well and lay in a buttered dish. Set the dish to bake, and twice in the course of baking pour over the roll a sauce of butter and sugar, mixed with boiling water or hot claret. Serve the rolls with the same sauce, only richer, and flavored with nutmeg or lemon peel.

GRAPE COBBLER.—Grape cobbler properly made is a dish for the gods. Very ripe black grapes are best for it. Wash them twice—on the bunches and after picking. Line a deep pie-dish with half-inch crust, the best you can make; put in the grapes, with all the sugar that will lie between them, heaping the fruit a little in the middle. Put on the top crust, cut cross-slits in the middle and fold back the corners to leave an open square. Set the dish in a quick oven and while your pie bakes make a sauce, using half a cupful of butter, one cupful of sugar and one tablespoonful boiling water. Stir well over hot water and flavor with lemon juice, claret or grated nutmeg, according to taste. When the pie is nearly done, take it out, pour in the sauce through the opening in the crust, return it to the oven. Do not overbake it, but keep it hot until ready to serve.



# S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Sept. 26, 1900.

### CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Oct.	Nov.
Wednesday.....	77% @ 79 1/4	78% @ 80 1/4
Thursday.....	79% @ 77 1/4	80% @ 78 1/4
Friday.....	76% @ 78 1/4	77% @ 79 1/4
Saturday.....	79% @ 78 1/4	80% @ 79 1/4
Monday.....	77% @ 79 1/4	78% @ 79 1/4
Tuesday.....	77% @ 78 1/4	78% @ 77 1/4

### LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	Sept.	Dec.
Wednesday.....	6s 2 1/2d	6s 4 1/2d
Thursday.....	6s 2 1/2d	6s 4 1/2d
Friday.....	6s 2 1/2d	6s 4 1/2d
Saturday.....	6s 2 1/2d	6s 5 d
Monday.....	6s 2 1/2d	6s 5 d
Tuesday.....	6s 2 1/2d	6s 4 1/2d

### SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec., 1900.	May, 1901.
Thursday.....	1 09% @ 1 08%	1 16% @ 1 15%
Friday.....	1 09% @ 1 08%	1 15% @ 1 15%
Saturday.....	1 09% @ 1 08%	1 16 @ —
Monday.....	1 09% @ —	@ —
Tuesday.....	1 08% @ 1 08%	1 15 @ 1 15%
Wednesday.....	1 08% @ —	1 15% @ —

### WHEAT.

The Wheat market since last review has shown much the same sluggish condition and absence of firmness as previously noted. Ocean tonnage continues in light supply, with freight rates high, largely due to many vessels being tied up for the present in Government service. It is doubtful if many of these ships will be released in time to be available for wheat carrying or other business during the current season. While the English market is fully \$1.50 per ton firmer than a year ago, Wheat in this center is not salable to as good advantage as at corresponding date last year, owing to the higher figures current on grain charters. Shippers are really exacting less of Wheat than the difference shown in freight rate quotations of to-day and a year ago. Then iron ships were quoted at 36s. 3d., while a charter was effected the past week at 45s., the highest figure of the season, which is practically \$2.00 per 2000-lb ton over the top rate current at corresponding time in 1899. Last year there were more ships arriving than at present, however, and most of them had been previously chartered at less than spot rates. Should there be further improvement abroad, which there is likely to be, Wheat should receive the benefit, but that shipowners and exporters will willingly make concessions on behalf of Wheat is improbable. The United States visible supply east of the Rockies is given at 54,993,000 bushels, indicating an increase for week of 1,066,000 bushels.

### CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, \$1.09 1/2 @ 1.08 1/2.  
May, 1901, delivery, \$1.16 1/2 @ 1.15.

Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at \$1.08 1/2 @ —; May, 1901, \$1.15 1/2 asked.

California Milling.....	\$1 08% @ 1 10
Cal. No. 1 shipping, alongside.....	1 05 @ —
Oregon Valley.....	1 05 @ —
Washington Blue Stem.....	1 05 @ 1 08%
Washington Club.....	1 02% @ 1 05
Of qualities wheat.....	1 00 @ 1 02 1/2

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-1900.	1900-01.
Liv. quotations.....	6s 1d @ 6s 1 1/2d	6s 6 1/2d @ 6s 8d
Freight rates.....	36% @ —	42% @ 45s
Local market.....	\$1 03% @ 1 06 1/4	\$1 05 @ 1 06 1/4

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

### FLOUR.

Business doing is of very moderate proportions, both for export and on local account. Values remain notably unchanged, but market is weak at current figures quoted, which at present are based mainly on asking prices. Much of the business now being done is the result of selling pressure, and is effected through granting concessions to buyers.

Superfine, lower grades.....	\$2 25 @ 2 50
Superfine, good to choice.....	2 60 @ 2 80
Country grades, extras.....	3 15 @ 3 40
Choice and extra choice.....	3 40 @ 3 65
Fancy brands, jobbing.....	3 60 @ 3 75
Oregon, Bakers' extra.....	2 90 @ 3 25
Washington, Bakers' extra.....	2 90 @ 3 40

### BARLEY.

Shipments of this cereal continue to be

made to Europe, and barley continues to go aboard vessels destined for foreign ports, but there is no evidence of much stock now changing hands in this center on foreign account. Shippers have been doing considerable of their buying in the interior, and have been running largely on best grades of feed rather than on brewing stock, being able to purchase the former to better advantage, and, after running it through cleaners, dump the offal on this market at very low figures, to the detriment of sellers of common feed barley. There was little done in futures and prices on Call Board did not show much fluctuation.

Feed, No. 1 to choice.....	72% @ 75
Feed, fair to good.....	65 @ 70
Brewing, No. 1 to choice.....	80 @ 85
Chevalier, No. 1 to choice.....	97% @ 1 02%
Chevalier, No. 2.....	85 @ 90
Chevalier, poor.....	70 @ 75

### OATS.

Movement in this cereal has been of fair volume lately on Government account, but not much has been doing otherwise. Values are being maintained at previously quoted range, but firmness is confined more particularly to choice to select qualities, those continuing in light receipt.

White Oats, fancy feed.....	1 35 @ 1 40
White, good to choice.....	1 25 @ 1 30
White, poor to fair.....	1 15 @ 1 20%
Gray, common to choice.....	1 15 @ 1 25
Milling.....	1 30 @ 1 37 1/2
Surprise, good to choice.....	1 30 @ 1 45
Black Russian.....	1 10 @ 1 25
Red.....	1 12% @ 1 30

### CORN.

Market is so slimly supplied that there is little wholesale business possible, and quotations for the time being are more in accord with jobbing prices than with wholesale values. Especially is domestic product in scanty stock.

Large White, good to choice.....	1 22% @ 1 25
Large Yellow.....	1 20 @ 1 23%
Small Yellow.....	1 60 @ —
Eastern, in bulk (carload lots).....	1 15 @ 1 17%

### RYE.

Values keep at a low range, despite the fact that moderate quantities are going aboard ship for Europe.

Good to choice, new.....	87% @ 90
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### BUCKWHEAT.

As for some time past, there is little doing in this cereal, owing to very slim supplies. Quotations are based mainly on dealers' ideas of values.

Good to choice.....	1 65 @ 2 00
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### BEANS.

Arrivals of beans are showing some increase, but are still far from being heavy. Very few new Small White and Pea beans have been received up to date, and prices for these remain at a tolerably high range. While the market throughout is showing unsettled condition, prices continue to be in the main much better sustained than buyers had generally anticipated for this date.

Pea, fair to good, 100 lbs.....	3 75 @ 4 00
Small White, good to choice.....	3 50 @ 3 75
Lady Washington.....	2 40 @ 2 65
Pinks.....	2 50 @ 2 70
Bayos, good to choice.....	2 60 @ 2 75
Reds.....	3 00 @ 3 25
Limas, good to choice.....	5 15 @ 5 25
Black-eye Beans.....	2 50 @ 2 75
Horse Beans.....	1 75 @ 2 00
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 75

Recent advices by mail from New York give the following report of the bean market, prices quoted being per 60-lb. bushel:

The tone of the market has been somewhat improved, and most varieties close rather firm. Supplies of old stock have worked down very low, and the new crop has come forward slowly. Farmers are busy with other crops and are in no hurry to thresh out beans. Interior dealers have been disinclined to buy many lots, owing to the uncertainty of the position. There has been no special life to trade here, but most of the jobbers have wanted a few goods and the small available supply has given sellers some advantage. Most sales of average choice '99 Marrow have been at \$2.15, but at the close the feeling is firm with holders asking \$2.17 1/2 @ 2.20, and effecting some sales where the quality is very fine. Medium have remained quiet at \$1.80 @ 1.82 1/2, except for an occasional fancy lot which has jobbed at \$1.85. Pea have had fair call and the stock has become exhausted; a few lots of new have arrived and sold promptly at \$2.05, and that figure has been obtained for several days past for choice old. The firmness at present is due wholly to light stocks. Red Kidney have made an advance of 5 @ 10c; recent sales mainly at \$1.95 @ 1.97 1/2, but \$2 has been obtained for a few, and that price is now generally asked. White Kidney and Yellow Eye steady but quiet. Most of the Turtle Soup are held speculatively and values nominal. Lima cleaning up closely and prices well sustained at \$3.52 1/2 @ 3.55. Out-

of-town buyers are taking the foreign beans, and there are not enough left to have much influence on the market. Green and Scotch peas ruling firm under light receipts.

### DRIED PEAS.

Few coming forward from any quarter, and prospects are that the market will not be burdened with offerings at any time the current season. There is not, however, any very sharp competition among buyers.

Green Peas, California.....	2 00 @ —
Niles Peas.....	1 75 @ —

### WOOL.

Much the same stagnant condition prevails in the wool market as for weeks past, and inactivity continues to be reported in Eastern manufacturing centers. Values are not notably lower, and it is the general belief that current rates will be maintained, if not slightly improved upon, when wholesale operators again see fit to resume buying in noteworthy fashion.

### SPRING.

Humboldt and Mendocino.....	16 @ 18
Northern, free.....	14 @ 16
Northern, defective.....	11 @ 13
Middle Counties, free.....	14 @ 16
Middle Counties, defective.....	11 @ 13
Southern Mountain, 12 mos.....	8 @ 10
Southern Mountain, free, 7 mos.....	9 @ 11
Southern Mountain, defective, 7 mos.....	8 @ 10
Oregon Valley, fine.....	17 @ 19
Oregon Valley, coarse to medium.....	16 @ 17
Eastern Oregon, choice.....	15 @ 16
Eastern Oregon, fair to good.....	11 @ 14
Nevada, as to condition.....	14 @ 16

### FALL.

San Joaquin.....	7% @ 10
San Joaquin Lambs.....	8 @ 9

### HOPS.

There is a good demand for hops, and the market presents a very healthy tone. A shortage of about 100,000 bales, equivalent to about 33 per cent, as compared with 1899, is reported in the English crop. The yield in this State will fall materially below that of last year. It must be remembered, however, that there are considerable quantities of old hops in some of the wholesale centers, and these are likely to be soon foisted upon the market at a nice profit.

The following report of the hop market, coming forward by mail of recent date, is from a New York authority:

During most of the week the weather has been very favorable to the harvesting of hops in New York State, and the bulk of the crop was picked and housed in good shape. On Wednesday a severe wind storm swept over the central and northern sections, blowing down the vines and doing some damage, but to what extent is not known here as yet. It is generally calculated that the yield will be about the same as last year. Growers do not seem in a hurry to market their hops, and the few sales reported of late have been mainly at about 15c. Advices from the Pacific coast indicate rapid progress in the harvest and a good deal larger percentage of fine hops than was picked last year. Cable advices from London give no reason to change previous estimates of the crop, which is likely to be 35% to 40% short of last year. Our local market has been in a sort of waiting condition, operators wanting to see the outcome of the English crop. A moderate quantity of stock is going to brewers to meet current requirements, and there is some export business from here and on direct consignments from the West. Supplies in first hands are lighter than usual for the season of year, and this makes a firm holding of most grades. The business that transpires is within the range of our quotations.

Advices by recent mail from New York City furnish the following review of the dried fruit market:

### HAY AND STRAW.

The tendency of values in the hay market has been to firmer figures, especially for choice to select hay, with arrivals on the decrease, and the demand about as good as for some time past. A German transport sailing this week for China took about 800 tons horse feed, a large portion being hay. Another transport took 9,800 bales. Straw is commanding steady figures, with demand fair at prevailing rates.

Wheat.....	8 50 @ 12 50
Wheat and Oat.....	8 50 @ 11 00
Oat.....	7 50 @ 10 50
Barley.....	6 00 @ 9 00
Volunteer.....	5 00 @ 6 50
Alfalfa.....	6 00 @ 7 50
Stock.....	5 00 @ 6 50
Compressed.....	8 50 @ 12 50
Straw, 3/4 bale.....	25 @ 37 1/2

### MILLSTUFFS.

Market for Bran and Middlings was moderately firm at below noted advance. Rolled Barley was in very fair supply, but market presented a steady tone. Milled Corn was in light stock and market did not favor buyers.

Bran, 3/4 ton.....	15 50 @ 16 50
Middlings.....	17 50 @ 20 00

Shorts, Oregon.....	16 00 @ 17 00
Barley, Rolled.....	15 50 @ 16 00
Cornmeal.....	26 00 @ —
Cracked Corn.....	27 00 @ —

### SEEDS.

The market is about bare of Mustard Seed, this year's crop having been speedily disposed of and at comparatively good figures. The yield, however, was light. Flaxseed has been arriving in moderate quantity, mostly under contract. Business in other seeds quoted herewith was of small volume and at figures warranting no changes in quotations.

	Per ctt.
Mustard, Trieste.....	3 75 @ 4 00
Mustard, Yellow.....	4 75 @ 5 00
Flax.....	2 00 @ 2 50

	Per lb.
Canary.....	3 1/2 @ 4
Rape.....	2 @ 3
Hemp.....	3 1/2 @ 4

### BAGS AND BAGGING.

There is no activity at present in bags or bagging of any description, and every indication that the market will continue exceedingly quiet during the greater part of the Winter. Values remain notably as last noted.

Calcutta Grain Bags, huyer June-July.....	— @ —
Calcutta Grain Bags, spot.....	5% @ —
San Francisco Grain Bags, 2x36, spot.....	5% @ 5 1/2
State Prison Bags in lots of 2000, 7 1/2 @ 100.....	5 65 @ —
Wool Sacks, 4 lbs.....	— @ 32 1/2
Wool Sacks, 3 1/2 lbs.....	— @ 28 1/2
Fleece Twine.....	7 1/2 @ —
Gunnies.....	— @ 12 1/2
Bean Bags.....	4 1/2 @ 5 1/4
Fruit Sacks, cotton.....	6 1/2 @ 7 1/4

### HIDES, PELTS AND TALLOW.

Eastern market for Hides and Pelts has lately shown slight improvement, but is still above the parity of values current here. Local market is very quiet. Tallow is ruling steady, with no special accumulations of stocks.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	9	8
Medium Steers, 48 to 56 lbs.....	8 1/2	7 1/2
Light Steers, under 48 lbs.....	8	7
Heavy Cow Hides, over 50 lbs.....	8	7
Light Cow Hides, under 50 lbs.....	8	7
Wet Salted Kip.....	8	7
Wet Salted Veal.....	8	7
Wet Salted Calf.....	8 1/2	7 1/2
Dry Hides.....	15	12
Dry Kip and Veal, 11 to 16 lbs.....	15	12
Dry Calf, under 4 lbs.....	15	12
Salted Horse Hides, large.....	2 00 @ —	—
Salted Horse Hides, medium.....	1 50 @ —	—
Salted Horse Hides, small.....	1 00 @ —	—
Dry Horse Hides, large.....	1 50 @ —	—
Dry Horse Hides, small.....	75 @ 1 00	—
Dry Colts' Hides.....	50 @ —	—
Pelts, long wool, 3/4 skin.....	75 @ 1 00	—
Pelts, medium, 3/4 skin.....	50 @ 70	—
Pelts, short wool, 3/4 skin.....	30 @ 40	—
Pelts, shearing, 3/4 skin.....	15 @ 25	—
Deer Skins, best summer.....	27 1/2 @ 30	—
Deer Skins, good medium.....	20 @ 22 1/2	—
Deer Skins, thin winter.....	— @ 10	—
Elk Hides.....	10 @ 12	—
Tallow, good quality.....	4 @ —	—
Tallow, No. 2.....	3 @ 3 1/2	—
Goat Skins, perfect.....	30 @ 37 1/2	—
Goat Skins, damaged.....	10 @ 20	—
Kid Skins.....	5 @ 10	—

### HONEY.

Market presents a healthy tone, being lightly stocked with all descriptions, with inquiry not lacking, even for most common qualities, although choice to select naturally commands the most attention.

Extracted, White Liquid.....	7 1/2 @ 8
Extracted, Light Amber.....	6 1/2 @ 7 1/4
Extracted, Amber.....	5 1/2 @ 6 1/4
White Comb, 1 lb frames.....	13 @ 14
Amber Comb.....	11 1/2 @ 12 1/4
Dark Comb.....	8 @ 9

### BEE SWAX.

Current values continue to be well maintained, stocks being of decidedly small compass.

Good to choice, light, 3/4 lb.....	26 @ 28
Dark.....	24 @ 25

### LIVE STOCK AND MEATS.

Beef is still ruling relatively higher in the country than in this center, buyers anticipating an advance which has not yet developed. Mutton is without quotable change, but market is not noteworthy for strength. Hog market is moderately firm at decline below quoted. Packers are using all that are not required for fresh meat.

Beef, first quality, dressed, net 3/4 lb.....	6 @ —
Beef, second quality.....	5 1/2 @ —
Beef, third quality.....	5 @ —
Mutton—ewes, 6 1/2 @ 7c; wethers.....	6 1/2 @ 7 1/4
Hogs, hard grain fed, medium.....	5 1/2 @ 5 1/2
Hogs, small, fat.....	5 1/2 @ 5 1/2
Hogs, large, hard.....	5 1/2 @ —
Hogs, feeders.....	5 @ 5 1/4
Hogs, country dressed.....	6 1/2 @ 6 1/4
Veal, small, 3/4 lb.....	6 @ 9
Veal, large, 3/4 lb.....	8 @ —
Lamb, spring, 3/4 lb.....	8 @ —

### POULTRY.

There has been a soft and generally un-



satisfactory market for most descriptions of poultry during the greater part of the week under review. Receipts of home product showed some increase and there were heavy arrivals of Eastern, the latter having much to do with the existing depression.

Turkeys, live hens, # lb.	11	@ 13
Turkeys, live gobblers, # lb.	10	@ 11
Turkeys, Young, per lb.	14	@ 15
Hens, California, # dozen.	3 50	@ 5 00
Roosters, old.	3 50	@ 4 00
Roosters, young (full-grown).	3 50	@ 4 50
Fryers.	3 00	@ 3 50
Broilers, large.	3 00	@ 3 25
Broilers, small.	2 00	@ 2 50
Ducks, old, # dozen.	3 00	@ 4 00
Ducks, young, # dozen.	3 50	@ 4 50
Geese, # pair.	1 25	@ 1 50
Goslings, # pair.	1 50	@ 1 75
Pigeons, old, # dozen.	1 25	@ —
Pigeons, young.	1 75	@ 2 00

#### BUTTER.

Prices for fresh have been further advanced, but firmness of the market has been confined principally to most select. Buyers are giving increased attention to packed and cold storage stock, and these descriptions are receiving the preference over common grades of fresh.

Creamery, extras, # lb.	28	@ —
Creamery, firsts.	26	@ 27
Creamery, seconds.	24	@ 25
Dairy, select.	24	@ —
Dairy, seconds.	20	@ 22
Dairy, soft and weedy.	—	@ —
Mixed store.	16	@ 17
Creamery in tubs.	20	@ 22
Pickled Roll.	20	@ 21
Parkin, California, choice to select.	20	@ 21
Parkin, common to fair.	17	@ 18

#### CHEESE.

The quantities arriving from factories in this State is on the decrease and the market is showing firmness, with no likelihood of values receding materially for several months. Eastern Cheese is commanding comparatively stiff prices, both at this center and at primary points.

California, fancy flat, new.	10	@ —
California, good to choice.	9	@ 9 1/2
California, fair to good.	8 1/2	@ 9
California Cheddar.	—	@ —
California, "Young Americas".	9 1/2	@ 11

#### EGGS.

Market is higher and for most select qualities is moderately firm at the advanced figures. Receipts of fresh are light, especially of stock which can be guaranteed in every way to most particular consumers. Eastern and cold storage Eggs are in good supply, with market for these in the main favorable to buyers.

California, select, large, white and fresh.	33	@ —
California, select, irregular color & size.	25	@ 31
California, good to choice store.	19	@ 22
Eastern, as to section and grading.	19	@ 24
Eastern, cold storage.	—	@ —

#### VEGETABLES.

Arrivals of most kind are on the decrease, but prices have not improved materially in consequence, the demand not being very active and competition among buyers not especially pronounced. Onion market ruled fairly steady, with tolerably good demand, but stocks sufficient for requirements.

Beans, String, # lb.	2	@ 3
Beans, Wax, # lb.	2	@ 3
Beans, Lima, # lb.	2	@ 3
Cabbage, choice garden, # 100 lbs.	1 00	@ 1 25
Cauliflower, # dozen.	50	@ —
Cucumbers, Bay, # box.	25	@ 40
Egg Plant, # box.	30	@ 50
Garlic, # lb.	3	@ 3 1/2
Green Corn, # sack.	50	@ 75
Green Corn, Alameda, # crate.	75	@ 1 25
Onions, Yellow Danver, # cental.	50	@ 65
Okra, Green, # box.	30	@ 60
Peas, Sweet, garden, # lb.	2	@ 3
Peppers, Green Chile, # box.	30	@ 50
Peppers, Bell, # lb.	35	@ 65
Pickle Cucumbers, No. 1, # cental.	1 00	@ 1 25
Pickle Cucumbers, No. 2, # cental.	50	@ 75
Squash, Summer, # large box.	30	@ 40
Tomatoes, River, # large box.	35	@ 60

#### POTATOES.

Considerable business has been transacted in Potatoes, both for shipment and on local account, values showing steadiness. Receipts were of fair volume, and while there was no particular excess of offerings, especially of the better grades, the supply proved sufficient to enable the filling of orders about as rapidly as received. Sweets were in fairly liberal stock and were offered at generally easy figures.

Burbanks, River, # cental.	55	@ 70
Burbanks, Salinas, # cental.	85	@ 1 05
Sweet Potatoes, Yellow, # cental.	75	@ 1 40

#### The Fruit Market.

##### FRESH FRUITS.

Aside from Apples and Grapes, the quantity of fresh fruit offering at present is of rather slim proportions and is showing steady decrease. Apples are in fairly liberal stock, but offerings do not include many which can be termed choice to select. Fine Apples are commanding a fairly good market, but common qualities are salable only at low figures. Graven-

steins have been the favorite, but the season for this variety is about ended. Later varieties will now come in for more attention, and several kinds will be practically in equal favor with consumers. Bellflowers will be accorded considerable attention during next sixty days. Table Grapes sold at about same range as preceding week. Seedless Sultana continue to receive the preference and command the best figures. Wine Grapes are not arriving in large quantity, but not many are required to satisfy the local demand at current rates. Pears of late varieties are in fair supply, but Bartlett's have almost disappeared from market. Peaches are still offering, but only in a limited way, and choice sell to fair advantage. Plums were in light supply, but were not materially higher. Figs made a light showing and were mostly under choice. Berries in season brought better average prices than preceding week. Melons were in lighter demand and lower, owing to cooler weather.

Apples, fancy, 4-tier box.	1 00	@ —
Apples, good to choice, # 50-lb box.	60	@ 90
Apples, common to fair, # 50-lb box.	25	@ 50
Apples, Crab, # box.	—	@ —
Blackberries, # chest.	—	@ —
Cantaloupes, # crate.	50	@ 1 00
Figs, # 1-layer box.	30	@ 50
Figs, # 2-layer box.	50	@ 75
Grapes, Tokay, # box.	40	@ 65
Grapes, Seedless Sultana, # crate.	1 00	@ 1 25
Grapes, Isabella, # crate.	50	@ 1 00
Grapes, Rose of Peru, # box.	40	@ 65
Grapes, Black Hamburg, # box.	40	@ 65
Grapes, Zinfandel, per ton.	20 00	@ 26 00
Grapes, Muscat, # box.	40	@ 65
Raspberries, # chest.	5 00	@ 7 00
Nectarines, Red, # box.	—	@ —
Nectarines, White, # box.	—	@ —
Nutmeg Melons, # crate.	30	@ 60
Plums, ordinary varieties, # box.	25	@ 40
Plums, fancy, # box.	50	@ 65
Prunes, # crate.	35	@ 75
Peaches, # box.	35	@ 80
Peaches, wrapped, # box.	65	@ 80
Peaches, Cling, # ton.	—	@ —
Peaches, Freestone, # ton.	—	@ —
Pears, Bartlett, # box.	1 00	@ 1 50
Pears, common kinds, # box.	35	@ 75
Pomegranates, # small box.	40	@ 75
Quinces, # box.	30	@ 50
Strawberries, Longworth, # chest.	6 00	@ 8 00
Strawberries, Large, # chest.	3 50	@ 5 00
Whortleberries, # lb.	4	@ 6
Watermelons, # 100.	8 00	@ 20 00

#### DRIED FRUITS.

Most of the business in this line the current week has been in Prunes, which have been moving freely Eastward and coastwise at rates recently established. Europe has not purchased to any noteworthy extent thus far this season, having a good crop of her own, and not caring especially for other than the large sizes of California Prunes, prices for which European dealers claim are higher than they feel justified in paying. Jobbing houses have been doing a fair business in filling orders for assorted carload lots of California fruit making these up mainly out of stocks already in store, and not purchasing much from first hands, giving the market an inanimate and rather weak appearance to producers or their representatives, who had Peaches, Pears, Plums, Apples or Figs to offer in invoice lots. Apricots also, especially other than choice to fancy, failed to move readily at figures satisfactory to the producer. With a more active Eastern inquiry, which dealers confidently look for a little later on, and a marked reduction of stocks in the hands of distributors, these fruits which are now receiving very little call from first hands are expected to again come into request. As Smyrna Figs are now on the way to this country in wholesale quantity, the Government quarantine against them having been raised, the market for the home product is quiet, but there are no evidences of holders of desirable stock showing inclination to make marked concessions to effect sales. Heavy damage by storm is reported to the Eastern Apple crop, and this is imparting a better tone to the market for domestic product, the situation East being firmer.

EVAPORATED OR BLEACHED.		
Apricots, Royal, prime.	8 1/2	@ 7
Apricots, Royal, choice, in sacks, # lb.	7 1/2	@ 8
Apricots, Royal, fancy.	9	@ —
Apricots, Moorpark.	10	@ 12 1/2
Apples, in 50-lb boxes, rings, pressed, fancy.	5 1/2	@ 5 1/2
Apples, 50-lb boxes, rings, pressed, good to choice.	4 1/2	@ 4 1/2
Figs, White, fancy pressed.	6	@ 7
Nectarines, # lb.	4	@ 6
Peaches, unpeeled, fancy.	6 1/2	@ 7 1/2
Peaches, unpeeled, choice.	5	@ 6
Peaches, peeled, in boxes.	12	@ 15
Pears, unpeeled Bartlett's, halved, fancy.	7	@ 7 1/2
Pears, halved, unpeeled Bartlett's.	5 1/2	@ 6 1/2
Pears, quartered, unpeeled Bartlett's.	5	@ 6
Plums, Black, pitted.	4 1/2	@ 6
Plums, White and Red.	6	@ 7
Prunes, Silver.	4 1/2	@ 6

Prices for new crop Prunes, as named by the California Cured Fruit Association: Santa Clara, four sizes, 3c. per lb.; 40-50s, 7c.; 50-60s, 5 1/2c.; 60-70s, 3 1/2c.; 70-80s, 3 1/2c.; 80-90s, 2 1/2c.; 90-100s, 2 1/2c.; 100-120s, 2c., which is the uniform price for this grade; Sonomas, other than smallest, 1/2c. less; other districts, 1/2c. less, except for smallest; Ruby, 1/2c. premium.

#### COMMON SUN-DRIED.

Apples, sliced.	3	@ 3 1/2
Apples, quartered.	3 1/2	@ 4 1/2
Figs, Black.	2	@ 3
Figs, White.	3	@ 3 1/2
Peaches, unpeeled.	4 1/2	@ 5

A severe storm passed through this State early in the week, and in some sections much damage was done to apples and the market is considerably stronger on futures, though prices are ranging about the same, buyers hesitating to pay any advance until the extent of the damage is more thoroughly known. The few old evaporated apples available are working out in a small way at about late prices; some new southern have appeared, showing poor quality and sales reported at 4 1/2c, with other stock offered at 4c. For future delivery prime evaporated are quoted 4 1/2c for October and November and 4 1/2c for December and January. Scarcely anything doing in old sun-dried apples or chops and waste. A few new sun-dried have appeared, but opening prices not well established. A car of very nice southern quarters sold at about 3 1/2c; northwestern quarters quoted 4 1/2c for October and November delivery, chops 1 1/2c and waste 1c. Southern peeled peaches are held at 8 1/2c and moving slowly. Cherries held firmly, though outside quotation full. Raspberries continue scarce and high. Huckleberries have advanced to 14c, with some holders asking more. Blackberries quite plenty and easy. California apricots have met a fair outlet at full former prices. New California peaches fairly firm. Some new California prunes have arrived, but value uncertain; on the coast 3c is quoted for the four sizes, with 5 1/2c for 50s and 7c for 40s.

Apricots, Cal., Moorpark, 1900.	10	@ 14
Apricots, Cal., 1900, # lb.	8	@ 9
Peaches, Cal., unpeeled, in bxs, # lb.	7 1/2	@ 9 1/2
Peaches, Cal., unpeeled, in bags, # lb.	7	@ 9
Prunes, Cal., # lb.	4 1/2	@ 6 1/2

#### RAISINS.

The Growers' Association fixed prices last Saturday for current crop, which are given below. Although about half a cent higher than last year for average stock, numerous orders have been booked, coming from all sections of the country. Some Raisins were forwarded East prior to last Saturday, subject to prices established on latter date. The weather most of the week has been first-class for curing. The quality of this year's fruit is averaging fine.

F. O. B. FRESNO DELIVERY.—CARLOAD LOTS.		
Imperial Clusters, 6-crown, # 20-lb box.	3 00	@ —
Debesa Clusters, 5-crown.	2 50	@ —
Fancy Clusters, 4-crown.	2 00	@ —
London Layers, 3-crown, # box.	1 60	@ —
do do 2-crown, # box.	1 50	@ —
(Usual advance for fractions.)		
Loose Muscatel, 4-crown standard, # lb.	—	@ 7
Loose Muscatel, 3-crown.	—	@ 6 1/2
Loose Muscatel, 2-crown standard.	—	@ 6
Loose Muscatel, seedless.	—	@ 6 1/2

(Above prices for loose raisins are for 50-lb. boxes.)

Thompson Seedless.—Bleached fancy, # lb., 12c; choice, 11c; standard, 10c; prime, 9c. Unbleached, 9c.

Sultanas.—Bleached fancy, # lb., 10 1/2c; choice, 9 1/2c; standard, 8 1/2c; prime, 8c. Unbleached, 8c.

#### CITRUS FRUITS.

As new Oranges are expected in a month or six weeks, and as carload lots of late Valencias are still coming forward, it looks very much as though the seasons were overlapping each other. Demand for this fruit is naturally light at this date. Lemons are being more steadily held than

for a week or two preceding, but supplies are of fair volume and more than ample for the current light inquiry. Limes are offering at a decline from last quoted prices.

Oranges—Navel, # box.	2 00	@ 3 00
Valencia, # box.	2 75	@ 4 00
Seedlings, # box.	1 00	@ 1 50
Lemons—California, select, # box.	3 00	@ 3 50
California, good to choice.	2 00	@ 2 75
California, common to fair.	1 50	@ 1 75
Limes—Mexican, # box.	4 50	@ 5 50
California, small box.	—	@ —

#### NUTS.

Almonds are moving outward in moderate quantity at generally unchanged values. Walnuts will move freely at recently established rates as soon as ready for shipment, orders heavy in the aggregate having been already received. Values for Peanuts are being well maintained.

California Almonds, shelled.	24	@ 27
California Almonds, paper shell, # lb.	12 1/2	@ 13 1/2
California Almonds, standard.	10	@ 11
California Almonds, hard shell.	7	@ 8
Walnuts, White, soft shell.	8 1/2	@ 10 1/2
Walnuts, White, California, standard.	7 1/2	@ 9 1/2
Chestnuts, California Italian.	12	@ 15
Peanuts, California, fair to prime.	5	@ 6
Peanuts, Eastern, hand-picked.	6	@ 6 1/2
Pine Nuts.	5	@ 6

#### WINE.

There is nothing at present upon which to base quotations for new Wine, and values for the same will likely be very poorly defined for several months yet. Wine grapes continue in good request, and with active competition among buyers, prices for dry wine stock have advanced \$2@3 per ton since the opening of the season. There are few choice northern grapes now obtainable under \$20 per ton at interior wineries, and sales have been effected in a small way at \$26 per ton, San Francisco delivery. The quotable range may be said to be \$16@25 per ton, as to quality, quantity and point delivered.

#### Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.		Since July 1, '00.	Same time last year.
Flour, # sacks.	79,258	1,208,900	1,302,843
Wheat, centals.	138,126	1,159,701	1,005,866
Barley, centals.	193,641	1,568,380	1,991,665
Oats, centals.	16,841	265,548	196,027
Corn, centals.	1,832	13,660	24,270
Rye, centals.	15,107	70,117	55,797
Beans, sacks.	3,164	32,389	42,152
Potatoes, sacks.	30,773	343,565	257,088
Onions, sacks.	5,544	55,163	59,272
Hay, tons.	4,201	55,584	49,744
Wool, bales.	991	10,186	17,450
Hops, bales.	530	1,089	1,872

#### EXPORTS BY SEA.

FOR THE WEEK.		Since July 1, '00.	Same time last year.
Flour, # sacks.	37,568	599,768	763,451
Wheat, centals.	46,076	990,266	781,406
Barley, centals.	84,078	962,038	1,487,541
Oats, centals.	39	22,839	12,280
Corn, centals.	—	5,102	3,987
Beans, sacks.	876	10,102	4,682
Hay, bales.	9	19,973	22,628
Wool, pounds.	—	233,621	75,991
Hops, pounds.	1,561	73,825	189,565
Honey, cases.	25	819	1,503
Potatoes, packages.	1,980	14,990	13,544

#### California Dried Fruit at New York.

NEW YORK, Sept. 26.—Evaporated apples common, 3@4c; prime wire tray, 4 1/2@5 1/2c; oboice, 5 1/2@6c; fancy, 6@6 1/2c. California dried fruits.—Market is fairly steady, but movement is not brisk at full current rates. Prunes, 3 1/2@7 1/2c. Apricots, Royal, 11@14c; Moorpark, 15@17c. Peaches, unpeeled, 6@9c; peeled, 14@18c.

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## THE VETERINARIAN.

### Protecting Northern Cattle Against Texas Fever.

Northern cattle breeders have for many years experienced great losses from Texas fever in shipping blooded stock from the North into the Southern States. Northern cattle not being immunized against Texas fever, that is, rendered exempt from it, succumb very readily to the disease, and the losses among cattle shipped from the North have amounted to from 40% to 70%. Any method of rendering Northern cattle exempt from Texas fever (or, as it is termed, immune) is, therefore, of great economic importance to cattle breeders and cattle raisers. The Bureau of Animal Industry of the Department first demonstrated the nature of the blood parasite which causes the disease and the fact of its transmission by means of the cattle tick. It was also shown experimentally by the Bureau of Animal Industry that immunity against Texas fever could be produced in susceptible cattle by inoculation with the blood of native southern cattle or artificially immunized cattle.

For some time past the Missouri Experiment Station in co-operation with the Texas Experiment Station and the Missouri State Board of Agriculture has conducted experiments for the purpose of perfecting this method, especially in its application to high-bred cattle. The inoculation experiments of the Bureau of Animal Industry were made upon a small number of ordinary cattle. The experiments under discussion were carried out on a large scale and upon a variety of pure breeds of cattle.

It appears that immunity against Texas fever can be brought about only by the production of a mild form of the disease in the animals to be immunized. This inoculation with the disease may be accomplished in two ways: Either by infesting with ticks or by inoculation with blood of immune animals. The latter method seemed to promise better results and has been more thoroughly studied in the experiments referred to.

In the operation fresh blood from an animal which has thoroughly recovered from Texas fever and is perfectly immune should be used. In all cases, however, the inoculated animals develop fever symptoms to a greater or less extent, and some deaths will result from the inoculation fever, but these were less than 8% in the experiments reported. The first fever is to be expected about the eighth or ninth day after injection of the defibrinated blood and usually persists for somewhat more than a week. The temperature of the animals during this time may be comparatively high and the digestive functions of the animals will be more or less disturbed. Usually a secondary fever period occurs about the twenty-fifth to the thirtieth day after inoculation and continues for a period of about a week. This secondary attack is ordinarily less severe than the first. Occasionally subsequent slight attacks of the fever may be manifested, but these are for the most part insignificant. After the animal has thoroughly recovered from the first inoculation, it is frequently necessary to give another inoculation, and after recovery from this second inoculation a third or fourth may be necessary, provided the animals continue to show a fever reaction. It is advisable to use small amounts of blood for inoculation at the start and gradu-

ally increase the doses until no fever results. The process of immunizing is a slow and gradual one, and it is probably not safe to consider an animal perfectly immune until about one year after the inoculation.

The animals which are to be immunized should be in good condition and should be well fed and cared for during the experiment. It is especially important to see that the bowels are kept open.

In order to carry out this method of immunizing it is necessary, as already stated, to use the blood in a perfectly fresh condition, and, therefore, to have the animal from which the blood is to be drawn for inoculation purposes on the same premises with the animals which are to be immunized. If the blood for inoculation could be drawn

and kept for some time or shipped to other places, it would remove this necessity of having an immune animal at each locality where cattle are to be inoculated. Experiments recently conducted at the Louisiana Station indicate that perfect immunity may be conferred upon susceptible cattle by inoculating them with blood taken from engorged ticks on immune cattle. This discovery may prove of considerable importance since the ticks may serve as convenient receptacles in which to keep the blood for inoculation for a considerable period without danger of its undergoing any changes. The inoculation fever which was produced by using blood from ticks was somewhat milder than that which followed upon inoculation with blood taken from immune cattle, but appeared to confer perfect immunity.

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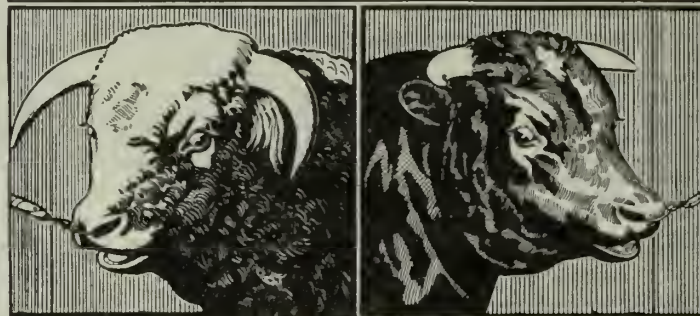
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100 lbs. of NITRATE OF SODA per acre applied early in the spring does it. Promotes stooling, stimulates growth, increases yield. Of great value on all crops, vegetables, grass, fruits, etc.

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## THE STABLE.

### Popular Kinds of Horses.

Horse breeding must be increased to meet the demand which is now taking out of the country so many animals. It is important not to breed simply any kind of a horse or no particular kind of horse but one of the several types which are clearly wanted in the market. We have often described these but review is necessary and the points are well made in adding, by John A. Craig, professor of Animal Husbandry in the Iowa Agricultural College, before the Illinois Stock Breeders' Association:

The market for horses in practically the same in regard to the nature of the demand as it has been in past years. There are three main types of horses that sell well, with the addition of another lately which is advancing rapidly in favor. The four types then that I wish to refer to are the carriage horse, the roadster, the saddle horse and the draft horse.

The carriage horse has distinctive features, possessing unusual symmetry, fullness of body and above all things, coach or carriage action. He stands close to sixteen hands high, upheaded, with smooth conformation, plump with muscle and having sufficient weight to easily move a heavy carriage. The action required in this type is the most necessary characteristic. It is not necessary to go into the details of it further than to say that there is unusual folding of the knee and high lifting movement, which indicates spirit and force, rather than rapidity.

The roadster, or trotter, or perhaps as the market knows it, the gentleman's driver, is a horse of a type quite different from the coach horse. He is smaller, trimmer built, appearing somewhat "racy" and as perfectly mannered as the coach horse should be. His purpose is to contribute to the pleasure of some one who enjoys driving, and at the same time speeding with competitors. Such a horse must be able to show a rapid gait and maintain it, and at the same time be almost perfect in manners. The action of this horse differs considerably from that of the coach horse, as speed is one of the important considerations. Then with this there must be the ability to show as much speed as possible whenever called upon, without the aid of any artificial means of assisting the action.

The other class of horse which finds favor in the market is the saddle horse. This horse, in addition to being beautiful in conformation and perfectly mannered should possess the five saddle gaits—the walk, trot, canter, rack or single foot, and fox trot. The education of the horse in this direction is the gift of genius and has its reward in the prices that are paid in the markets.

In regard to the prices of these three classes of horses there is not very much difference for the very highest type of each of them. They are all hard to produce in the highest degree of their

excellence, and as a consequence they have a high value in the market. They are horses that require a great deal of training and demand the best horsemanship to bring them out in the best condition.

The horse that seems to fit into farm production better than any other is the draft horse. The demand for weight is still as great as in past years, so that a draft horse to sell well must weight from 1600 pounds upwards and be of draft type. That is, he should be massively built, deep bodied, heavy in muscle and short in limbs, with feet properly constructed out of durable material. Such a horse can be economically raised on the farm, and, owing to the demand for him, he finds ready sale on the market. He may not be so perfectly mannered nor so true in action to bring his full value in the market as the other types I have mentioned; consequently he can be produced cheaper and with less risk than the others.

For a burn or scald make a paste of common baking soda and water; apply at once, and cover with a linen cloth. When the skin is broken, apply the white of an egg with a feather; this gives instant relief and keeps the air from the flesh.

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They are clear, transparent, not misty. Look at your chimney. How much of the light is lost in the fog?

Be willing to pay a little more.

Our "Index" describes all lamps and their proper chimneys. With it you can always order the right size and shape of chimney for any lamp. We mail it FREE to any one who writes for it.

Address **MACBETH, Pittsburgh, Pa.**

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what prices will be, but Page Fences are cheaper now. **PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.**

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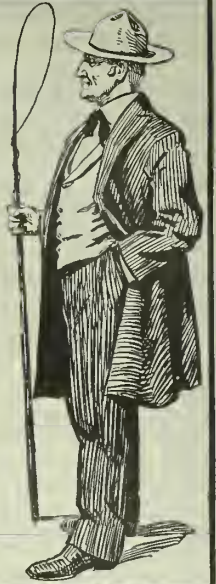
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We have valuable books telling all about the use of fertilizers and Potash which should be in the hands of every farmer. We gladly mail them FREE. A postal will do.

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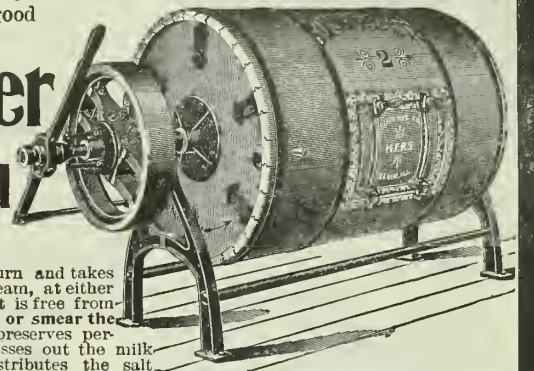
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## If You Want to Make the Best Butter

that can be made from good cream, buy and use the

### Squeezer

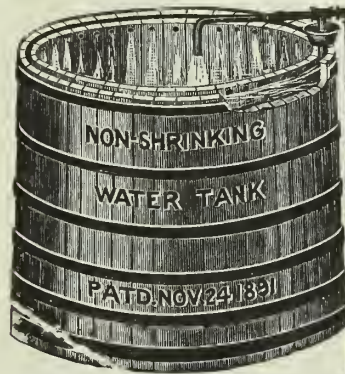
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**Churn and Worker.**



It is the most exhaustive churn and takes out all the butter fat in cream, at either high or low temperature. It is free from friction and does not grind or smear the butter. It both makes and preserves perfect grain. It squeezes—presses out the milk and water as it were. Distributes the salt with absolute evenness, preventing all spotted or mottled butter. Then too, it is so easy to operate and so easy to clean. This size is for the dairy, but we make factory sizes as well. We repair promptly all separators and any kind of dairy and creamery machinery.

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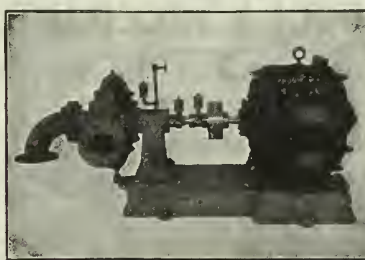
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## Patrons of Husbandry.

The Late Wm. Saunders.

TO THE EDITOR:—A great and glorious life has been closed; great and glorious, although not spent on the battle field, but on the peaceful paths of horticulture and agriculture, for the benefit of mankind in general. His entire public career was devoted to studies and active work to advance whatever was calculated to bless his fellowman. It is not the practice of our modern days to make omissions and give these benefactors of their race the acknowledgements and the praise they so richly deserve when living. And when death calls them very seldom are monuments erected over their remains. But their monuments are spread far and wide over the land, and Mr. Saunders has left them in millions of trees planted under his direction. As an old, almost life-long friend of the deceased, and also as a thorough Californian, though not a native son, I feel like paying a passing tribute to the memory of this good and kindly man, who sympathized deeply with all agriculturists, the man at the plow as well as the landscape gardener, the organizer and first Worthy Master of the Patrons of Husbandry, and the one who sent to California that priceless boon, the Navel orange.

I met Mr. Saunders first about forty years ago, just before he was called to take charge of the agricultural grounds, with his life-long friend and partner, Thos. Meehan, at Philadelphia, and was at once attracted to him by his congenial spirit, his enthusiasm for horticulture and his broad and substantial knowledge. He was at that time in partnership with Thos. Meehan in the nursery business at Germantown, and planned and laid out perhaps the most beautiful park in the country, the Fairmount, at Philadelphia, where the Centennial Fair was held in 1876. Soon after this he was called to Washington to take charge of the grounds and greenhouses of the Agricultural Department, a position he has held ever since, being the oldest attache of the department at the time of his death. When I first met him then he had just organized the order of the Patrons of Husbandry and was its first Master. His thoughts, first and foremost, were always for the advancement of our farmers, which he considered the bone and sinew of the land.

His labors, since that time, can only be mentioned casually here. He laid out the beautiful grounds, every plant and tree was put in under his personal supervision, and as president of the improvements of Washington City, the committee, composed of himself, Mr. Smith, Supt. of Public Gardens, and Mr. John Saul, have made Washington what it is, the most beautiful city in this broad land. His work at Gettysburg, at Springfield, on the Lincoln monument grounds at Clifton Park, and in Washington City as Park Commissioner, have never been remunerated by a dollar, showing the innate grandeur of the man. I never met him since without being impressed with his simplicity, and yet his vast knowledge. In the vast greenhouses, where only plants of economical value were cultivated, thousands of specimens, he could give the origin of every variety, their use in commerce and agriculture or medicine, and its habits. His mind seemed to be a vast storehouse of useful information.

Mr. Saunders was born in Scotland, at St. Andrews. He was early educated for the ministry, but it seems, as many of his ancestors had been gardeners, the love of this lay in his blood, and he left the study of the ministry for the study of nature, which looks up from "nature up to nature's God," and adopted another mission. How well he has fulfilled it his whole life bears evidence. These few lines, from one whom he honored by calling him friend, may be but a passing tribute to his worth. But the millions of trees which he planted, or caused to be planted, are a better monument than slabs of marble or granite, and will serve to "keep his memory green" in this State, which

owes him so much. A good and kindly nature has gone to its last reward. All we can do is to revere his memory and follow in his footsteps.  
Napa. GEORGE HUSMANN.

### The Alamo Herefords.

The Alamo herd of Herefords, belonging to John Sparks of Reno, Nevada, has gained a distinction seldom awarded to any herd on the American continent.

At the recent State Fair held in Sacramento a herd of eighteen Herefords were on exhibition and were awarded every premium but one in class, grand sweepstakes and a gold medal by the State Agricultural Society of California. The celebrated Hereford bull Jack Hayes, that was exhibited at the Sacramento Fair in 1899, was sold at public Hereford sale held in Kansas City last year for \$7500. At the State Fair held in Sacramento in 1899 they won all the prizes offered but one, with a gold medal for the best display of live stock other than horses.

In that year this herd was awarded two sweepstakes in class, seven grand sweepstakes in beef herds out of a possible nine.

In the year 1898 they were awarded every premium in Herefords at Sacramento, as also in 1897, at the Sacramento Fair, held by the State Agricultural Society of California. At the public auction of Herefords held in Kansas City in October, 1899, John Sparks was the highest bidder and next to the largest seller. He paid \$2500 for the heifer Armour Rose, by Armour Maid, bred by K. B. Armour of Kansas City.

This herd now numbers 500 head, selected and bred from the best strains of Herefords from noted domestic and imported prize winners.

### Prune Industry in Shasta.

Anderson Valley News, Sept. 15: Last Saturday afternoon a News reporter was invited by the manager of the Ludwig Fruit Co., Wm. Weaver, to ride out to the 200-acre orchard and see what is being done in the way of handling the prune crop. Two acres were covered with trays filled with prunes drying in the sun, while near the fruit house huge piles of the fruit lay on platforms. The only steam dipper and spreader combined in this vicinity is here. It is run by steam power. There are two vats, the first filled with boiling lye and the other with water. The prunes are dumped into a self-feeding hopper from which they drop into the hot lye and are then carried on an elevator into the next vat, from which an elevator takes them to the spreader. From there they are run on trays ready to be

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Leading Dip of the World  
Sixty Years.

USED ON 150,000,000 YEARLY.

Not a refuse product of tobacco or dye factories. A sheep dip invented and made specially for sheep. You are asked to use it because it is the best. It occupies a supreme position in all countries. It is free from objections so common in others. It cures without injury. No smell.

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## ALMOND HULLERS

—For Sale by—  
A. O. RIX, Irvington, Alameda County, Cal.



taken to the drying yard. There are 14,000 prune trees in this orchard, and it is estimated that there will be at least 300 tons of dried prunes. There are seventy-six people, men, women and children, on the payroll of the company.

At the orchard of Shanahan & Sons, consisting of over 200 acres, a force of over fifty people are employed harvesting the prune crop. In this orchard there are 16,000 prune trees, some just beginning to bear. T. W. H. Shanahan, the manager, estimates that there will be all of 200 tons of dried prunes this season. When the trees get to be in full bearing, the output of prunes from this orchard will rank with any in this section.

At the Aloha Fruit Farm, D. Z. Hawkins superintendent, fifty or more people are kept busy gathering the crop of prunes from 7000 trees. The manager estimates that with favorable drying weather there will be close to 200 tons of dried prunes. This orchard contains 200 acres set to peach, pear and other trees. There is also a fine almond orchard here. A large fruit house and other substantial buildings are in evidence of the prosperous condition of this fruit farm.

STATE OF OHIO, CITY OF TOLEDO, } ss.  
LUCAS COUNTY,

FRANK J. CHEYNEY makes oath that he is the senior partner of the firm of F. J. CHEYNEY & Co., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of CATARRH that cannot be cured by the use of HALL'S CATARRH CURE.

Sworn to before me and subscribed in my presence, this 8th day of December, A. D. 1896.

A. W. GLEASON,  
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Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces of the system. Send for testimonials free.  
F. J. CHEYNEY & CO., Toledo, O.  
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Hall's Family Pills are the best.

## List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
PIONEER PATENT SOLICITORS  
FOR PACIFIC COAST.

FOR THE WEEK ENDING SEPT. 11, 1900.  
657,689.—HOISTING APPARATUS—H. C. Behr, S. F.  
657,586.—CIPHER CODE—E. F. Cassell, Seattle, Wash.  
657,587.—CIPHER CODE—E. F. Cassell, Seattle, Wash.  
657,590.—ROTARY ENGINE—E. E. Couture, Gualala, Cal.  
657,692.—RAISIN CLEANER—H. Eastwood, Fresno, Cal.  
657,697.—HAND GRIP—Getz & Westall, S. F.  
657,599.—COPY HOLDER—G. F. Heiss, Everett, Wash.  
657,700.—HARVESTER—B. Holt, Stockton, Cal.  
657,738.—CARBURETOR—H. L. Jessen, Watsonville, Cal.  
657,777.—PIPE PERFORATOR—G. W. Kellogg, Bakersfield, Cal.  
657,605.—COATED METAL PIPE—W. Lacy, Los Angeles, Cal.  
657,827.—METAL LATH—W. McCall, S. F.  
657,706.—WATER-CLOSED TANK—A. W. McGahan, Los Gatos, Cal.  
657,885.—LOCK AND LATCH—M. C. Patrick, Seattle, Wash.  
657,802.—CURB MOLD—C. A. Watson, Riverside, Cal.  
657,719.—GATE—C. H. Williams, S. F.  
657,845.—PNEUMATIC TIRE—J. M. Wolbrecht, Los Angeles, Cal.  
33,183.—DESIGN—F. E. Libenow, Spokane, Wash.

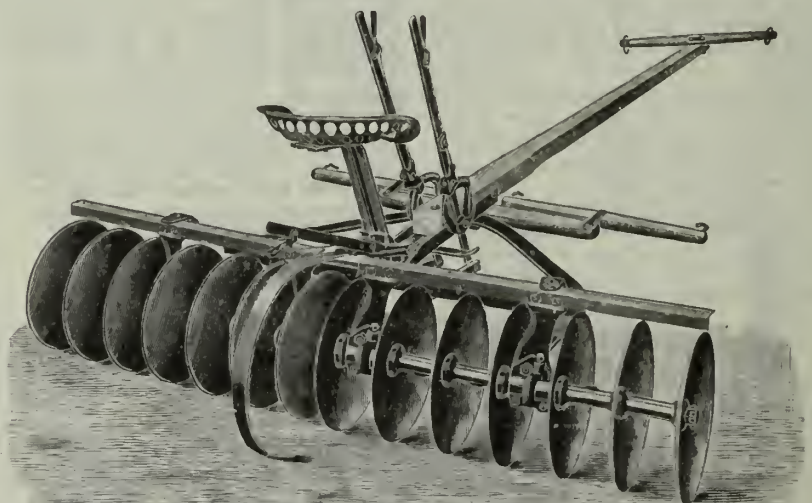
### Farm Wagon only \$21.95.

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Company, Quincy, Ill., have placed upon the market a Farmer's Handy Wagon, that is only 25 inches high, fitted with 24 and 30-inch wheels with 4-inch tire, and sold for only \$21.95.



This wagon is made of the best material throughout, and really costs but a trifle more than a set of new wheels, and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

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Sizes 6 to 12 feet in 16 and 20-inch Discs, Solid or Cutaway.

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HARROW is accurately balanced whether the driver is on or off the seat. A CENTER TOOTH cuts out the ridges always left by Harrows of this class.

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ALSO FULL LINE OF

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### For Sale in Tracts to Suit.

Come and see the crops growing on the Rancho Santa Clara del Norte. Now is the time. A large ditch runs through the property, guaranteeing ample water rights to irrigate every acre of land.

Farmers and orchardists seeking good productive land for all kinds of crops—Beans, Beets, Alfalfa, Corn, Barley, Walnuts, Apricots and Lemons—will do well to look into this proposition before investing elsewhere.

The climatic conditions are as near perfect as possible.

For full information, apply to GEO. C. POWER, Agent. Office—Palace Building, 152 Main St., Ventura, California.

### Rose Culture.

You must prune properly and you must disbud. So important are these two points that it is almost possible to draw a rigid line dividing the roses of amateurs into classes—those which are properly pruned and disbudded, and those which are not pruned, or absurdly pruned, and not disbudded.

By proper pruning is meant cutting down the healthy shoots of the previous year to five or six eyes, and cutting all the weak and dead and very old wood right out. Some people object to cutting their plants low, on the ground that it diminishes the foliage, or is contrary to nature, or for some other reason equally trivial. If we left nature to do its work in precisely its own way, our gardens would soon become hopeless tangles; while, as for the foliage, you would get abundance if you cut to the crown.

Disbudding, in the limited sense in which I have used the term, means merely removing the numerous small buds which usually surround the central calyx as soon as they appear. Nothing is lost by doing so. If the large flower is eventually cut, the small buds are necessarily taken with it; and if it is allowed to remain upon the tree, they come at best to a crabbed maturity beneath its fading petals. The very general neglect of an operation so trifling and so important as this is difficult to understand. No chrysanthemum grower, however small his stock and lukewarm his interest, would think of failing to disbud. The habit once acquired, it becomes a mechanical process almost unconsciously performed, and must not be confused with the far more drastic measures of the exhibitor, who removes not only his buds, but all his more weakly shoots, in order to throw adventitious strength into a few especially vigorous ones—a practice which is quite unnecessary for the purpose of the ordinary grower.—English Magazine.

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## Creamery Earnings.

E. J. Merritt, manager of the skimming station of the Woodland Creamery at Yolo, stated that the station was now handling 6000 pounds of milk, an increase of 4200 pounds over the first day. Prospects were very favorable for a still larger increase and it is confidently expected to see the receipt of of milk reach twice its present amount, in which event the association will be compelled to put in another separator. Albert Bemmerly of Yolo is milking twenty-four cows, which milk he takes to the creamery. He recently realized in one month the sum of \$194 net, the gross receipts being \$228. That's a good showing, his cows averaging for him an average of \$8.12½ a month above all expenses. At that rate a cow is worth something, her annual earnings being \$97.50. Mr. Bemmerly intends doubling his herd of milchers.—Woodland Mail.

### Redlands Apples.

William Lehr picked several large apples recently from a tree on his ranch in West Redlands. One apple measured fourteen inches in circumference and weighed one pound two ounces. Three others, measuring from thirteen to thirteen and a half inches each, averaged a pound. There's nothing small about Redlands! One of these apples found its way to our desk. It was firm and heavy. Flavor good, subacid, rather coarse-fleshed, and while not as juicy as mountain apples, would be called a good apple anywhere. It is of the pippin class, but just what variety we are unable to tell.—Citrograph.

## The Whole Story in one letter about

# Pain-Killer

(PERRY DAVIS')

From Capt. F. Loye, Police Station No. 5, Montreal:—"We frequently use PERRY DAVIS' PAIN-KILLER for pains in the stomach, rheumatism, stiffness, frost bites, chilblains, cramps, and all afflictions which befall men in our position. I have no hesitation in saying that PAIN-KILLER is the best remedy to have near at hand."

Used Internally and Externally.

Two Sizes, 25c. and 50c. bottles.

## GLENN RANCH, Glenn County, : : : : California, FOR SALE In Subdivisions.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for county and State taxation purposes.

This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

## F. C. LUSK,

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.

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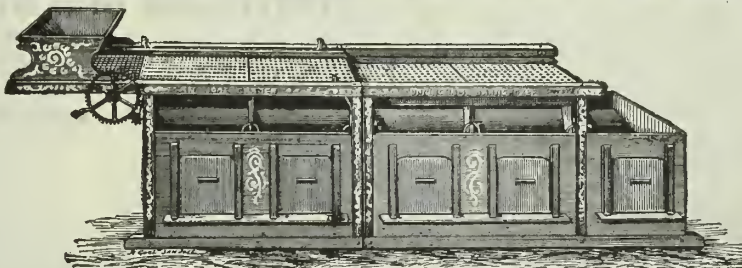
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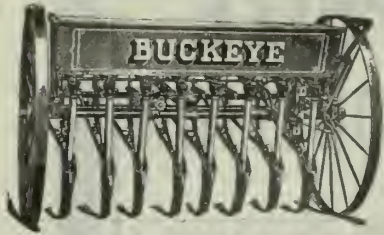
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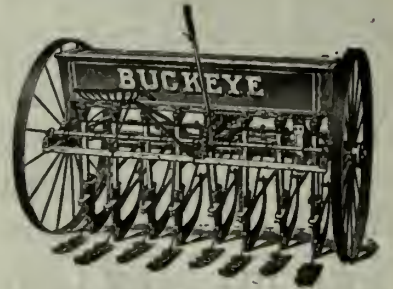
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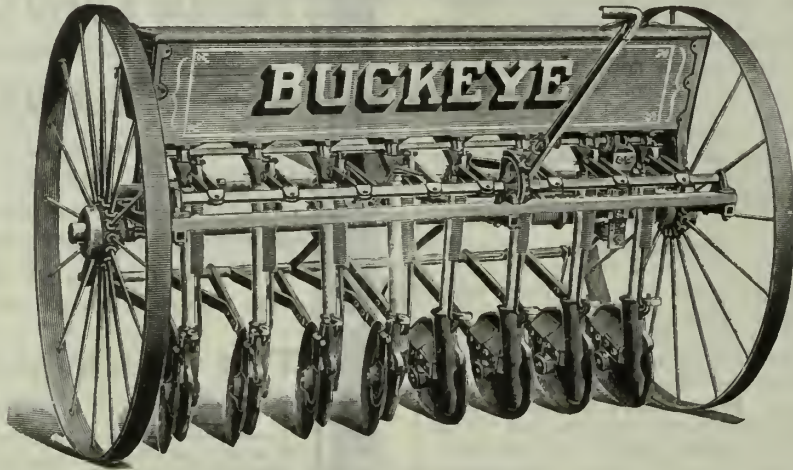
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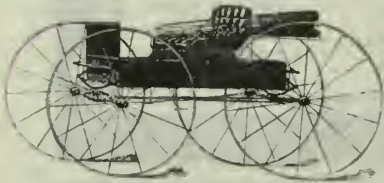
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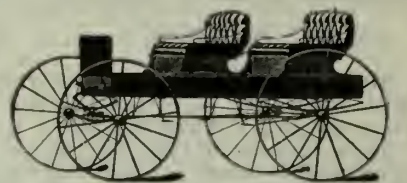
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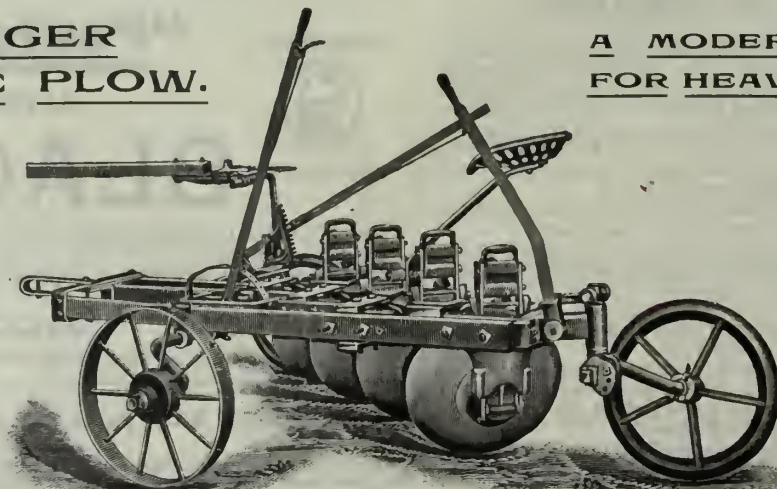
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 14.

SAN FRANCISCO, SATURDAY, OCTOBER 6, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

### Lemon Pruning.

Pertinent to the discussions on lemon pruning which have been given in the last two issues of the PACIFIC RURAL PRESS, we have herewith photo-engravings of trees which illustrate some of the styles to which the writers alluded. In the coast region of southern California, and particularly in San Diego county, there has been a tendency to overcome the rambling growth of the lemon by the most heroic repressive treatment. The most radical method was that practiced by Mr. A. C. Baronio, an Italian horticulturist who lived at La Mesa. He began by cutting out the whole center of the tree and followed by cutting out upright-growing shoots or suckers and encouraging the growth of small shoots or fruit spurs on a flat framework.

A very excellent account of the Baronio method, both in cutting back old trees and in training young trees to low horizontal growth, was prepared by Mr. G. P. Hall of San Diego, and is published in the report on "Citrus Culture in California" by B. M. Lelong, of which we have recently spoken favorably. We are indebted to Mr. Lelong for the pictures presented on this page. Mr. Baronio's method is a rational one, based largely upon European practice in the exact and systematic pruning of garden trees in Europe, so as to secure the greatest growth of bearing wood and the least extension of branches. It is a method which must be systematically continued in utmost detail to secure results aimed at. This great requirement led many to go half way and a "semi-Baronio" plan has been proposed, of which a pic-



General View of Lemon Trees at Chula Vista.



Open Center Lemon Tree of Mr. Leffingwell.



Lemon Tree Cut Back by Mr. Baronio at La Mesa.



So Called Semi-Baronio Form of Lemon Tree.



Baronio Training Two Years from Cutting Back.

ture is also given. It aims to escape from the single story of flat branches and use upright shoots therefrom, cut back and made to carry fruit spurs. It does not seem to be a rational performance, as it transgresses the first principle of the Baronio training.

We believe a better form of open-center tree is suggested in the essays of Mr. Leffingwell and Mr. Allen, which we have recently published. This builds up a vase form rather more analogous to that which has prevailed in the California training of deciduous trees. It prevents running away of branches and it prevents overcrowding of bearing shoots. It encourages ample growth of bearing wood low down.



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E. J. WICKSON..... Horticultural Editor.

San Francisco, October 6, 1900.

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## The Week.

Rains have come in sufficient amount to signify a turn in the season and may be expected now in almost any reasonable amount. Fortunately, the opening has consisted only of showers thus far, and not enough to injure late-drying fruit and dry feed. It seems to be simply a promise and a surety that the skies are not made of brass. The change is very grateful after the drouth and heat of the last two weeks, which, though good for prune and raisin drying, has been severe on wine grapes and has cost some growers north of the bay a loss of 20% in their crop weight and has profited the wine maker to equal amount in the water which he can add and still have the sugar percentage ample for fermentation. It seems another demonstration of the proverbial luck of the farmer. Just as the price for his grapes went up well the weather came along and took out water enough to annul the advance, while the buyer, who neither toils nor spins, turns on the faucet and gets ready to sell water at the price of the grape juice which he escaped paying for. It is any wonder that the farmer's smile has a way of running under his collar-band?

Wheat is having a troubled time of it. Futures have been knocked down, but have recovered somewhat. Spot wheat for shipping is a little lower. The advance in ocean freights to Europe has neutralized the equivalent advance which should have come from the condition of foreign markets. There is a strong bear movement—wheat is hard to knock down. Barley is tolerably firm; not higher, but in good shape with the offering limited. Oats are firm with the Government still buying for Asia. Corn is too scarce to be quotable. Hay is selling readily at the recent advance and receipts are only moderate. Bran moves freely; receipts have increased, but seem to have been largely placed before arrival. First quality beef is higher; the Government buying for shipment and the local demand is also picking up. Mutton is unchanged. Hogs are firmer and in poor demand. There is a small supply of fine fresh butter, but it moves slowly at the extreme high figures. Cheese is steady. Eggs are firm with few choice arriving, but enough for the top price customers, while stored and Eastern butter answers the call of common folks. Poultry is rather slow, except for the two extremes of large and small for broiling; medium sized fowls suit neither purpose and Eastern fowls are also crowding for sale. Beans are in heavier receipts, weaker and values somewhat unsettled. Potatoes are fairly active and unchanged; there be-

ing an especially good market for first-class stock. Onions are easier though quite free shipments are being made, both of onions and potatoes. Good apples and grapes are selling fairly. City wineries are buying in the country and paying above rates quotable at this point. It seems hard to get enough grapes to fill the cooperage now empty. Some oranges are selling fairly though not many are required at this season. The stock is "intermediate" Navels—a sort of belated crop—and Valencia Lates. Lemons are slowed down by cooler weather and the cheapening of limes. Hops are quiet and holders firm for higher bids. Honey is in light stock and good demand. The smaller prunes are moving freely and raisins are in good demand. Almonds are mostly gone except some papershells and hardshells. English walnuts are beginning to arrive under contract. Wool is too quiet to mention.

Dealers in real estate in San Francisco report an increased inquiry for farm properties. There seems to be quite a quickening along this line and there is every reason to expect a better movement this fall and winter than for several years past. The advance of values in the East following the better prices for agricultural products is setting free a good many people who have long been thinking of making homes in California but have been prevented hitherto because they could not dispose of property there to secure money for re-investment in California. This condition has, we understand, now largely changed, and we see evidence of it on our end of the line, in the stimulated inquiry. The growing prominence of California on the basis of increased export products of distinctive character, and because of the general elevation of far Western affairs because of new Asiatic activities of all sorts, is no doubt a very effective drawing card and increased inquiry for California investments and home-making is only a natural result. We seem to be just upon the verge of a wide expansion in State settlement and development in all lines of production and trade. Railway trains and hotels at central points are all doing a heavy business. Many people are going to and fro already and this is the more notable because it is far in advance of the usual season of California touring and a national political campaign is in progress which usually keeps people at home. As the temperature drops in the wintry States and when the voting is over we expect a much more general recourse to California. The present activity is rather exceptional and significant.

Newcomers to California at present have as a rule a broader conception of the adaptation and opportunities of California than formerly ruled. The disposition to investment in fruit properties is large and there is better determination to secure well-adapted lands and situations, but there is, beyond this, more interest in general farming and the purchase of larger tracts which can be developed in mixed farming in which, of course, fruit planting is included. We count this a fortunate thing and one which is likely to be satisfactory to the investors and of benefit to the State. Some very good bargains are now being obtained in California and we expect that the purchasers will largely profit by them. We heard of a sale in one of the counties north of the bay where the tract was about one-quarter bottom land and three-quarters bench and hillside—nearly a thousand acres in all—which the purchaser secured for what he considered a fair price for the bottom land alone. He proposes mixed farming, including features suited to his varied holding, and, as he is a mid-Western farmer, combining both thrift and enterprise in his past career, we expect he will soon have a grand farm, not a ranch in the old significance of the term. It does not need a thousand acres to do this, but if one has the capital and knowledge with which to handle it, the size is no objection—to say the least of it. This land has lain practically unused, that is, not effectively used, because the land has been run for this thing and that thing and never brought under a proper system of complementary products which would promote each other. The new man will teach his neighbors something, we believe.

But while we commend this reasonable plan of using land for what it is particularly suited, it must be always remembered that fruit planting is a part of this scheme. There is every reason why a considerable well-placed planting should be done this fall

and winter. There has not been a year in recent time when the preserved fruit product of the State passed so quickly out of sight as this year. Nuts are taking the same course. We shall be put to it to find enough of these fine products to eat this winter, as distant consumers have laid them in for their own use. The raisins will go off as rapidly and prunes are moving very actively. The report which comes this week from Consul Mason at Berlin to the State Department at Washington is very significant. He says:

The prospect for an unprecedented export of American dried prunes, apricots, peaches and pears, as well as evaporated apples and raspberries, to Germany this autumn and winter is exceedingly bright, provided the crop in the United States is sufficiently plentiful to furnish a large supply at reasonable prices. The popularity of American dried and preserved fruits in this country has increased from year to year by reason of both their relative cheapness and their unrivaled flavor and excellence until one of the leading wholesale dealers in such products at Berlin informs this Consulate that his applications from his customers, who are mainly grocers and provision dealers in the towns and city, are larger this season than ever before and relate almost exclusively to American fruits.

California prunes are rapidly supplanting the fine but expensive French product and the low-grade Bosnian prunes in the German market, and there is nothing here that can successfully compete with the dried pears and peaches and evaporated apples from the United States. It will, therefore, be of interest to American exporters to know that the tedious and annoying inspection of dried fruits at the German frontier, as a precaution against the supposed danger from the San Jose scale, has been discontinued since the first of last month, so that the way is open to unrestricted trade. Last year the supply of American dried fruits was insufficient to meet the demands of the German market, but this year large contracts have been made by American merchants who, after visiting the Paris Exposition, have come to this country and by way of combining business with travel have visited the principal German cities and personally offered their products to the more important dealers.

This probably explains in part why there was such a rush for our dried fruits this summer, and it promises much for the rapid disappearance of the prunes. While this is true, it clearly appears that we have not reached our limits in fruit lines. It also explains and justifies a sentence or two which W. H. Mills wrote from Paris in July, in which he said: "The natural conditions in California are as nearly perfect for the production of fruit as it is possible to be, and there are economies with us which will give us the fruit markets of the world. You may accept this conclusion as demonstrated by our exhibit and observation here. California is hereafter to be the orchard of the world, for reasons which will be more easily made apparent in a personal interview." No doubt Mr. Mills will have much to say along this line, and, as he has now returned to California, we may expect him to say it soon.

We need more fruit of the right kind planted in the right place, and we need less of fruits which require an ordinary lifetime to explain and make a market for. Common fruits in the uncommon excellence with which they can be grown here constitute a better line of investment and effort at present than they ever did hitherto, because we now understand better how to grow them and the world at large knows how good they are. Those who intend to plant this year should not delay too long in preparation. So far as our observations go, there is not an excessive stock of young trees available, and the nursery business should be brisk for those who make early announcement of what they have to offer this year.

The exhibits at the San Francisco and San Mateo Fair at Tanforan park have been exceedingly fine and varied and the management creditable. The attendance has hardly been up to expectations; but something at least has been gained, and that is the fact has been demonstrated to many people who did not know it before that the Pacific coast has pure-bred herds and flocks which will sustain comparison with any bred elsewhere.

It will interest our raisin growers to know that the old issue about the Zante currant duty free will cut but little figure this year, because the Greek currant crop is from 60% to 65% less than usual, and in the probable destruction of the crop none will come to this country.



## QUERIES AND REPLIES.

### Peach Propagation.

TO THE EDITOR:—I am thinking of planting a peach orchard the coming spring and I have been told that peach trees can be successfully grown from seeds, also that the seedlings will be true to their varieties and of as fine quality in every way as would be the case were the trees budded in the regular way. I write to ask your opinion as to whether that is the true state of affairs with regard to growing peaches. —PLANTER, Stanislaus county.

It is not true that peaches will usually come true to variety from the seed. There are a few kinds which come quite true, but no one ever thinks of growing peach trees from the seed because of the constant danger of sport and variation and the almost universal tendency to revert toward the wild type. You will have to get trees budded by reputable nurserymen in order to be at all sure of securing the kind which you wish to grow. Possibly your informant intended merely to speak of the desirability of the root grown from the pit of a seedling tree as a foundation for budded trees. Some attention is paid to that matter by nurserymen, and many believe that only seedling pits should be used to obtain seedlings. In California, however, such satisfactory results are obtained by using the pits from some of the strong-growing, yellow-fleshed peaches that it may be a question whether it is worth while to seek for seedlings, as some Eastern propagators do. Probably most trees are grown from cannery pits; and, as canneries insist on good fruit for their use, there is a certain amount of selection toward good seed incidentally practiced.

### The Sugar Prune.

TO THE EDITOR:—What character of soil and location is best suited to Burbank's Sugar prune? Two growers here have loam and sandy soil, with a depth of 15 feet to water, situated upon the first bench above the river, and with less frost than many other places. In such a place is the Sugar prune more desirable than others for profit?—G. W. INGALLS, Ukiah.

TO THE EDITOR:—As one of your readers and a student of your works, and being deeply interested in the welfare of Maywood colony, and knowing your wise and conservative judgment, I wish to ask your opinion of Burbank's Sugar prune. We have here fine prune soil for myrobolan or peach root, as you know. French prunes do well, but can we do better with the Sugar prune by way of returns? Will the market soon come to prefer it? I have several acres, fine for myrobolan, which I am holding for prunes, and I wish to make no mistake.—S. T. BREWSTER, Corning.

The Sugar prune is comparatively new, and perhaps enough experience has not been had to completely demonstrate its character and value. Still, it must be said that everything which we know about it up to this time is very favorable. It is sustaining its reputation for ripening three or four weeks in advance of the French prune, and wherever the trees or grafts are old enough to bear they are, according to accounts which come to us, fruiting very freely. In size it is all that it has been represented to be. We think the planting of it is as safe a proposition as it would be to plant any other new variety. As for the location, soils, etc., of which you speak, they seem satisfactory in every respect and adapted to very satisfactory growth and production of this prune, so far as it is possible at present to tell.

### Winter Feed for Pigs.

TO THE EDITOR:—Does Dwarf Essex rape frost kill? If not, how would it do to sow in the fall for small pigs? Can you tell me about Turkestan alfalfa and where the seed can be obtained?—A NEW SUBSCRIBER, Cottonwood, Cal.

The rape plant is quite hardy. It belongs to the mustard family and if your wild mustard grows in winter, as it does in most parts of the State, you ought to get a winter growth of rape. We do not know who has the Turkestan alfalfa seed. We have not been able to find it for sale.

### Book on Horse Breeding.

TO THE EDITOR:—What is the best up-to-date horse book—a general-purpose book to instruct in breeding and care of horses?—STUDENT, Saratoga.

The latest and best from the breeder's point of view is "Sanders' Horse Breeding." It treats of the business of breeding horses and the management of stallions, brood mares and foals and treatment of

diseases peculiar to breeding animals. Cloth, 12mo, \$1.50, postpaid. Another book which will be found useful is "The Family Horse," by Geo. A. Martin. It treats of stabling, care and feeding—a practical manual, full of the most useful information. Illustrated, cloth, 12mo, \$1. Both books can be ordered from this office.

### A Mite on Guavas.

TO THE EDITOR:—I send leaves and young fruit of Strawberry guava. Part of the fruits are in trouble with insect or fungus which spoils them and the mischief is spreading. Some are all right, so you can have some for comparison. What can we do?—O. N. CADWELL, Carpinteria, Santa Barbara county.

The foliage seems little, if at all, affected, but the fruit is badly injured, being covered with confluent blisters of a brownish color, while the normal specimens are smooth and green. The fruit is less than half an inch in diameter, so the trouble strikes it early. We find a mite on the specimens which seems to be capable of doing the injury shown by the fruit. To have the matter more closely determined we will send the specimens to Washington. If this is the cause, as now seems likely, the trouble could be checked by sulphuring the plant before the blooming and again after the fruit has set, or by using kerosene emulsion or some other cheap spray. The insects are not hard to kill, but they will have to be dosed carefully and at the right time to prevent injury.

### Defective Root Action.

TO THE EDITOR:—I write you in regard to an insect that has been working on my prune trees during the past year. By mail I send you some leaves off the trees for inspection. The disease commences on the end of the branches and in a short time the leaves all turn brown. Will you please write me giving a remedy?—GROWER, Tehama.

The twigs you send do not show insect work to any extent. The trouble seems to be in inadequate root action, as the new growth is almost nothing, and what there is is slim and pinched. From the appearance of the twigs the first conclusion would be that the trees did not have moisture enough to make satisfactory growth. If this position is not warranted by the facts the next conclusion would be that there is something in the soil which prevents vigorous root action. It is very clear that the cause of the trouble is in the soil or moisture supply and not in the top of the tree.

### Hardy Legumes.

TO THE EDITOR:—What variety of cow pea, or vetch, can be sown on bottom land in California in the early winter that will make a good winter growth and resist the frost? The idea is to make a good winter cow pasture and then plow the ground and seed to corn in the spring.—L. G. CLARK, St. Helena.

No cow pea will do; cow peas are beans and will stand no frost worth speaking of. Several of the vetches will stand quite a little frost, and the "hairy vetch" is the best we know of them for hardiness. We doubt, however, if any of these legumes is harder than the common field pea, and you can get seed of this cheaper than you can buy any of the vetches. Sow oats and peas together and the peas will climb the oats and do rather better for the lifting. Of course none of these may make satisfactory winter growth. It depends upon how much freezing you get.

### Fertilizing Value of a Cow.

TO THE EDITOR:—If all manure be properly saved and applied, how many acres will fifty cows keep up, supposing twenty acres to be cropped twice every year, oats and Indian corn, and balance in alfalfa?—READER, San Joaquin.

Experiments have shown that a cow may void twelve tons of liquid and solid excrements in a year. Six tons per acre would be a fair application to ordinary land for ordinary crops, though in some cases of worn land twice as much could be used to advantage. This is about as close a computation as can be theoretically reached. The conclusion of the whole matter depends upon practice and its results upon the particular land and crops that you are dealing with.

### Feeding Sorghum.

TO THE EDITOR:—You said in last year's papers that horses had been killed by eating sorghum. Please tell how it may be fed to stock safely.—STUDENT, Saratoga.

TO THE EDITOR:—Some time ago the PACIFIC

RURAL PRESS gave a warning against feeding sorghum green to stock. I wish to inquire if the warning applies to Kafir corn and Russian millet fed green.—R. E. BANGS, Modesto.

We never heard of horses being killed by eating second-growth sorghum. The fatality is to be guarded against in the case of cattle whose larger digesting apparatus enables them to take too much of it. The escape from the evil lies in feeding but very little at first and not giving cattle free access to it; or in cutting and wilting a day before feeding. Kafir corn is one of the sorghum family and commands caution if the growth is very fresh and rank. We do not know about the Russian millet, but if it is very rank look out for it.

## WEATHER AND CROPS.

### Report of the U. S. Weather Service for Week Ending October 1, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

#### SACRAMENTO VALLEY.

Conditions have continued favorable during the week. Drying winds and clear weather have been very beneficial to fruit drying and raisin curing, and favorable for the bean crop along the Sacramento river. The severe north wind of the preceding week in portions of Butte county caused but little damage to oranges, walnuts and chestnuts. The prune crop is nearly all gathered; in the vicinity of Grand Island the fruit is reported excellent in quality and the yield fair. The second crop of table grapes is ripening rapidly; there will be a heavy yield. Tokays are being sent to wineries in large quantities. Oranges are coloring and early olives are ripening.

#### COAST AND BAY SECTIONS.

The continued warm, dry weather has been favorable for fruit drying and for maturing grapes and late deciduous fruits. High winds caused some damage to late fruits in Lake county last week. Apples and pears in Humboldt and other counties are of good quality, and the yield is above average. Grape picking continues; there is a fair crop in nearly all sections. Hop picking is nearly completed; the yield is light. Bean thrashing is in progress. Corn is above average in some sections. Farmers have commenced plowing.

#### SAN JOAQUIN VALLEY.

Warm days and cool nights have continued during the week in most sections, and conditions have been quite favorable for raisin making and fruit picking and drying. Prunes are nearly all gathered; there is a fair crop and the quality is excellent, though there is considerable quantity of small size fruit in some sections. A good crop of wine grapes is being gathered. Raisin grapes are nearly all gathered and are drying rapidly; the quality is excellent and in many places the yield is reported nearly average. Hay shipments to Arizona and Southern California continue. Feed is plentiful and stock is looking well. Seeding summer-fallow is in progress in some places.

#### SOUTHERN CALIFORNIA.

Unusually high temperatures during the latter part of the week were favorable for raisin making and fruit drying. In some favored localities in the vicinity of San Diego large quantities of raisins are in the hands of the sorters. Walnut picking has progressed rapidly; in Orange county the nuts are said to be better filled than for several years, but there will be quite a large percentage of the smaller sizes. Bean thrashing continues; the yield is light. Near Santa Maria it is reported that water in the wells is lower than ever before known. In other sections the water supply is improving. Oranges are turning and will probably mature early.

EUREKA SUMMARY.—Weather conditions are favorable for picking apples and digging potatoes. The apple crop will be one of the largest ever gathered in this county. Some plowing is being done.

LOS ANGELES SUMMARY.—Hot norther toward the close of the week favorable for fruit drying, bean harvest and grain hauling. Warm weather materially hastened raisin making; the early harvested is almost ready for packers.

### Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Oct. 3, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall to Date.....	Total Seasonal Rainfall Last Year to Same Date.....	Average Seasonal Rainfall to Date.....	Minimum Temperature for the Week.....	Maximum Temperature for the Week.....
Eureka.....	1.28	1.53	1.30	1.49	46	68
Red Bluff.....	.88	1.11	.02	.58	52	108
Sacramento.....	.28	.32	.02	.30	48	88
San Francisco.....	.30	.77	.01	.57	47	80
Fresno.....	.00	.14	.00	.44	50	90
Independence.....	.00	.81	.07	.25	42	76
San Luis Obispo.....	.38	.38	.00	.65	42	92
Los Angeles.....	.00	.01	.01	.28	50	94
San Diego.....	.00	.07	.07	.17	56	86
Yuma.....	.00	.02	.08	.72	...	...



## HORTICULTURE.

### The English Walnut in Ventura County.

From an essay by J. M. DICKENSON at the Farmers' Institute at Montalvo.

In putting out an orchard the trees should be at least 50 feet apart, unless you have exceptionally fine walnut land and water too, then the trees might be nearer and so arranged that in after years when they begin to crowd a part can be removed and leave the trees in good shape for permanent orchard.

**CULTIVATION.**—As to the cultivation, I shall take it for granted that its object is the proper aeration of the soil, to incorporate fertilizers, and the conservation of moisture. Now, that method which best attains these results is the proper method. It has been the almost universal custom among farmers here, when the rains begin in the fall, to follow each rain with a cultivator, usually some form of the chisel cultivator, varying the process by now and then using a weed knife. The land is kept clean and looks well, but each time it is cultivated the surface becomes finer, depressions filled up and by the middle of winter, when heavy rains are likely to come we have the orchard very much like the side of a roof, hard and smooth, and away goes the water with the many soluble elements of the soil. Then we complain of the wash. Of course, this does not apply to land so nearly level that water does not run to waste.

**VALUE OF THE PLOW.**—I am a firm believer in the plow. Nothing has yet been made to take its place. I think the orchard should have a generous, deep plowing, shallow near the trees and deeper as you near the centers. Plow up and down the hill and if possible avoid leaving your dead furrows so that they lead water to low places, thus causing a collecting of water which results in a wash. At the first plowing an orchard the soil should be turned to the trees; at each subsequent plowing the soil should be turned to one row and away from its neighbor, alternating so that the surface is kept practically in the same condition. The object of first turning the soil to all the rows is that in the plowings to follow you may have something to turn away without unduly baring the roots. Now, my reason for advocating the plow is that you retain the water on the ground till it soaks into the soil. Doubtless most of you noticed how much more quickly the surface of a plowed plot of ground will dry after a rain, than that of a piece that has been chiseled, showing that in the former the water goes quickly down, while in the latter it is kept near the surface and in a great measure evaporates. I say again plow your orchard, plow early and if you have abundant rains plow late, too.

**SUMMER CULTIVATION.**—In cultivation after the plowing there are no hard and fast rules that can be laid down. Much has to be left to the individual judgment, but enough is known of California farming to guide us generally. When you see cracks in your soil or weeds growing there is no question but that you are losing. The foregoing remarks are for winter work; for summers the soil should be kept loose and free from weeds, as all summer work in my opinion is to prevent evaporation or waste through growing weeds. I know a very successful farmer who says he can pump more water with a cultivator than all the windmills in the country. I do not think so and I notice this year he has relied on the ditch rather than his cultivator pump. If he has water stored, the tendency all the time is to escape by capillary action; now by cultivating, he can break these capillary tubes and retain the moisture at or near the surface and this is why a plot of land becomes moist after being thoroughly worked down.

**PRUNING.**—Pruning the walnut is a very simple process; no branches should be cut off that can be left and allow a team to pass under, since the lower branches are those that bear the crop. Neither should the tree be carried too high before branching; 4 feet is high enough. Besides it matters not how high you take them when a paying crop is harvested they will have long since reached the ground. I know one man who pruned his trees about 8 feet from the ground and though they are old they have not borne anything of consequence yet. Mr. Gooch of the Rivera directorate, told me of, or rather showed me two orchards adjoining, of like soil, planted at same time, receiving the same treatment. One was headed low, the other high, the former producing about double the latter. The trees were then young, about four years ago. Since then I have heard nothing of them.

In regard to harness, I find a good many farmers still using the common high hames. Such should never be used in an orchard. Get low or round top hames, and by so arranging your lines as to bring your horses' heads well together, if your team is gentle and understands its business you can almost make them pick the limbs up in order to pass under them.

**HUMUS.**—There is another problem confronting us in this county which I think must be solved to get the best results, and it is this: How to keep the leaves on the land. Leaf mold is valuable. I have noticed year after year when I come to plow, the ground is

bare, though the trees had a heavy crop of leaves. The east wind had blown them all away. I have no plan to offer to overcome the difficulty. One of my neighbors suggests that Canada peas or some other legume be sown, not immediately under the trees, some time during early fall, and when possible the ground should be irrigated for the purpose and the vines left to grow till early spring and then turned under. They will have held the leaves against the strongest east wind and added immense fertility to soil.

### Small Fruits in Santa Barbara County.

By BERT McLAIN of Carpinteria at the Farmers' Institute.

A limited experience with small fruits precludes the remarks of the writer being in any way authoritative, or as full and suggestive as a more thorough acquaintance with the subject would command. It will be the purpose of this paper, then, merely to record a few notes from this limited experience and to note, perhaps, a few impressions that have been received along the line of the subject in hand.

My experience and observation lead me to assert that the Carpinteria valley is peculiarly adapted to the growing of small fruits. It might be well to note first, however, by way of emphasis, that water for irrigating is absolutely essential to the raising of small fruits in this locality. The results with water and without water are so widely divergent that they admit of no comparison.

**LOCAL CONDITIONS.**—The climatic conditions prevailing in this valley seem to be especially favorable to the growing of the strawberry. The fruit delights in cool, uniform temperature and, comparatively speaking, this condition prevails to a marked degree throughout the summer and serves not only to give a long growing season, but a long bearing season as well. The soil is apparently sufficient in itself, and fertilization is not necessary, though no doubt successive plantings on the same lands would demand attention in this particular. The long bearing season of the strawberry is an item worthy of special mention and indicates quite conclusively that the locality is a congenial home for this berry. Last year the writer commenced picking strawberries the middle of April, and almost without intermission regular pickings were made until the middle of October. Occasional pickings then followed up to January. This continual bearing season was made possible by a diversity of varieties, successive crops of one variety filling in the gap between crops of another variety.

**Too EXUBERANT GROWTH.**—There are several peculiar features connected with strawberry growing here that would warrant special mention. The first I would call your attention to is that cultivation is labor lost and fruit lost as well. When I first commenced growing strawberries I obtained all the literature (and it was mostly from Eastern sources) I could find on the subject and perused the same with some interest but very little profit. Without exception the directions and instructions called for thorough and persistent cultivation and liberal fertilization, barnyard manure being especially recommended in this connection. Both of these practices I have found should be discarded here and I think the experience of others will bear me out in the assertion. The conditions for plant growth are so favorable that, unless it is in some way restricted, fruit buds will not form. Cultivation will give you fine, large, thrifty plants, but you will be minus the fruit and it is fruit we are after, the plant is only means to an end. In order to keep plant growth and fruit production in proper relation, it is essential that the ground be allowed to pack as hard as it will in the beds. Irrigating furrows should be made alongside the rows and left, the same furrows answering throughout the irrigating season. Keeping weeds down should be the limit to cultivation.

It has always been a matter of inquiry with me why barnyard manure should apparently be fatal to strawberry plants when it is so universally used throughout the East with nothing but good results. My experience, however, and that of a number of others has been that, if you want to kill your plants, fertilize with barnyard manure. The manner of applying tallied with the method of Eastern growers, hence the reason or cause of its action is not to be looked for in that direction.

**PLANTING.**—In regard to the best time to plant, I would state a decided preference for fall-set plants, and as early in the fall as practicable. Fall-set plants grow more or less during the winter months and bear well the following spring and summer. Spring-set plants, especially if planted late, are inclined to make plant growth to the exclusion of everything else. It may be unreasonable to expect fruit the same season, but here in Carpinteria we are disappointed if we don't get it.

Varieties differ so under different conditions that little of help can be given as to varieties best to plant. Actual test furnishes the only safe guide. The Brandywine is probably more largely grown here than any one variety. It is a good all-round berry.

**OTHER BERRIES.**—Passing on to the dewberry and

blackberry, I would advise anyone thinking of planting to take the dewberry in preference to the ordinary blackberry. More fruit to the amount of ground occupied is one advantage that has appealed to me, and another is that it is possible to confine the dewberry within proper limits. This is made possible and comparatively easy from the fact that the dewberry propagates by tips. The blackberry has a root system that is something terrific and has an undesirable tendency to take all the land in sight. It is almost impossible to eradicate when once established. In quality the dewberry at its best compares favorably with the blackberry and some prefer it for canning. The dewberry season usually opens the last or latter part of May and continues well along into July.

I have had no experience with the Loganberry, but from the first have had little faith in it. Reports from the East speak of the results of its trial as being disappointing, its uncertain and undetermined bearing qualities being one item in question. [But the writer has already admitted that Eastern conclusions do not apply in California.—Ed.]

**THE GUAVA.**—Though perhaps not usually listed as a small fruit, the guava is, I think, entitled to a place in consideration of the subject in hand. This fruit is comparatively new, but seems to be increasing in popularity, and I give it as an opinion that there is a remunerative future awaiting those who can raise them successfully. They come at a time when the market is comparatively bare of other fruits. Outside of this feature they have many other good qualities, too. The guava is a very agreeable and acceptable fruit to the majority of people. The red or strawberry guava is the variety most commonly met with, but it is not by any means the only variety that promises well. The yellow strawberry guava will no doubt become a close rival to the red, which it differs from in color and taste only, the former being as its name indicates, yellow, while the flavor is slightly less acid than that of the red, and more agreeable to some. Besides the two varieties mentioned, we have on our place a third variety which has not fruited as yet. So far as tested the guavas do remarkably well in the Carpinteria valley. The plant begins to bear when very small and for productiveness rivals anything I have ever seen. I believe the guavas are to have their innings soon. That they can be raised with profit here has been demonstrated.

## THE FIELD.

### Beets vs. Beans.

By J. B. ALVORD of Oxnard at the Montalvo Farmers' Institute

The subject as handed me by your programme committee seems to imply an argumentative discussion. That is to say, an attempt on my part to prove that beets are more profitable crop to grow than beans. But as the advantage of one crop over another depends altogether on the varying conditions of soil, temperature, moisture, and especially of the market, it were idle to try to prove either side of a general proposition like the above.

**FERTILITY.**—Success in farming, as a rule, in any country, is attained best by a rotation of crops. If there be an apparent exception it surely is in the growing of beans on the rich alluvial soils of Ventura county, for we all know that after almost continual planting to beans for twenty-five years without any fertilizer whatever, our fields seem, with fair rainfall, to produce as abundantly of "frijoles" as when the American farmer with plow, cultivator and hoe first succeeded the vaquero and his lariat.

But a few years have demonstrated that such would not be the case with beets. I am willing to concede that I think that after I had grown beets continually upon my land for twenty-five years I should want to sell out. I judge from the apparent effects upon the soil after two or three crops in succession of beets. So if it came to a question of voting to abandon one crop or the other we should all stick to the beans. Certainly we should if present prices should prevail for all time.

**NOT ON BEAN LAND.**—But there is something to be said for the beet. It has been conclusively shown that beets equal in weight and generally better in sugar contents than those grown on the best bean land can be grown on and entirely unsuited to beans. This is owing simply to the fact that the beet root resists the action of alkali very strongly, better than that of any other cultivated plant within my knowledge; that is, after the seed has germinated and the young plants appear above the surface of the ground. Alkali gets in its deadly work on the beet just as the seed begins to germinate, even before the hull of the seeds has opened at all. So it often happens that seed planted in soil prepared in the most careful manner fails to make a good "stand." Such land needs to be planted very soon after a rain, the soluble alkali that had been in or upon the top layer of soil having been caved down by the recent rain. If the farmer who has much alkali in his soil, then, will hasten to get his ground prepared very early and will plant very soon after a rain he will succeed in



getting a good stand and very likely a heavy crop. I assure you all that I have paid well for the experience that enables me to emphasize this advice. If I had had sense enough to follow it a little more closely myself in the past I should be richer in both dollars and sense now.

**RESISTS ALKALI.**—Once out of the ground and with plenty of moisture below the beet seems to laugh at the alkali. Many a time have I seen the rankest and thriftiest of beets growing where the ground was white with alkali all around them. This is, perhaps, the greatest point in favor of the sugar beet as a staple crop in this valley. It enables one to use profitably lands that are almost worthless for any other purpose. And so beets grow best on land producing some, but only small or indifferent crops of beans; the beans grown heretofore on such lands being eliminated as a factor in the market, thus enhancing the price. In this way we beet growers have been a blessing, in disguise perhaps, but none the less a blessing, to you bean growers. So when you turn your eyes to the south and see the black smoke rising into the blue from the big stacks at the factory your spirits must rise also, for you know that because of it the price of beans has risen, too.

**FIXED PRICES.**—Another advantage in favor of beet is the certainty of price. The grower knows at the beginning what will be the price of beets of a given standard of sweetness, his only hope of profit lying in a heavy crop of rich beets, the largest or smallest aggregate crop of the district not affecting the price in the least. This must be wholesome in one way; that is, the removal of the alternation of hope and fear incident to rising and falling prices. And if farmers could get what they think they ought for their beets, they would find them very profitable to grow. Under the present contract system of selling to the manufacturer the latter undoubtedly pockets the lion's share of the profits of the industry and the farmer and farm laborers get the care, anxiety and hard work incident to the business.

**REQUIREMENTS OF A BEET CROP.**—In the growing of beets the difference between thorough, intensive and careful farming from the beginning of plowing and the end of harvest and slipspod, half-hearted work is emphasized more than in any other crop. We have all seen barley scratched in or even left to volunteer and yield abundantly, but beets won't respond generously to any such treatment as that.

Beets need, to begin with, abundant moisture. If the clouds do not supply it directly then nature's storehouses under our feet and in the heart of our great mountains must be drawn upon, and, fortunately for the people of this valley, the vastness of their reservoirs almost surpasses belief. An immense stream in the aggregate has flowed and been pumped from them all this summer without apparent serious diminution of the supply.

Beets require deep plowing and frequent cultivation of the soil previous to planting to insure a fine mellow seed bed. It, however, appears to be well to firm the ground slightly with the roller. Experience has shown that on our lands south of the Santa Clara river the rolling is easily overdone. As a matter of fact the methods and the routine of beet growing prescribed by the experts of the sugar company have had to be considerably modified under the conditions prevailing here. For instance, we were taught that it was necessary to cultivate and loosen the soil deeply between the rows after the beets were thinned and well up, say 6 or 8 inches high. But results showed this, in many cases, to do more harm than good.

The essential, yes, the vital, point in beet growing is to get a good stand. Without it failure and loss is almost certain no matter how good the season or how well done the preliminary work. With it and plenty of moisture some profit at least is almost assured.

For beets to attain a high percentage of sugar content they must be of moderate size and smooth, even shape. The only way to insure this is to have the beets distributed evenly over the ground, thus giving each an equal amount of space in which to grow. In rich, moist ground they must be but a few inches apart, 6 to 8 inches. If these methods are intelligently and assiduously followed there is, it seems to me, no reason why the beet grower should not succeed and find abundant profit, assuming, of course, that he works on suitable soil and has a generous supply of water.

**PROFITS COMPARED.**—As to the comparative profit of beet and bean growing, it is a difficult matter to make a comparison. The cost of producing and marketing a crop of beets, say of twenty tons per acre, according to the length of haul, will amount to from \$30 to \$35 per acre. Such beets should bring about \$80 per acre, leaving from \$45 to 50 per acre acre working expenses.

An acre of beans, yielding a ton per acre, should bring about the same money, at present prices, and as the working expenses of growing the beans will not exceed \$15 per acre, it is easily seen that the acre of beans would prove much more profitable. But suppose beans should fall to 2 cents per pound, as they often have? The difference between \$25 and \$50 per acre net profit will cause many a bean farmer to think seriously about a beet contract. So far we have considered the use of the best grade of bean

land. Suppose we take an acre of land that will do well to produce 1000 pounds per acre, but would yield twenty or thirty tons of beets per acre. I think not many beans would be planted on such land for many years.

The conclusion I have reached is that he who grows beets on bean land will be beat, and whoever grows beans where beets should be planted will be beat also.

## THE IRRIGATOR.

### Depth in Irrigation Furrows.

By GEORGE HAWLEY of El Cajon, at the University Farmers' Institute at La Mesa.

Different soils require different methods in irrigation. In one case we find the soil extending to water, and by capillary action the surface is kept moist—an ideal condition for plant growth and a perfect system of sub-irrigation. In another we may have much the same condition, except that from a few inches to several feet from the surface we find a layer of sand, which cuts off capillary action except in wet years, when the water rises near to the surface; then good crops are obtained, but in dry seasons the crops dry up, or "burn-out," as the saying is. To irrigate this successfully requires a large volume of water run over the surface quickly to prevent it leaching through the sand. A third condition, and that in which we find most soils that we have to deal with, is that in which a hardpan—rock of tenacious clay which is nearly or quite impervious to water—is found a few feet below the surface. In this we will find the roots of our orchard trees or vines, even though quite young, extending to the bottom and meeting at the sides. Now, if we can make a reservoir of this, putting the water in the bottom, where it is away from the influence of the hot sun and dry wind, we have approximated that ideal condition of sub-irrigation and its attendant capillary action of which I first spoke. If we can get the water from there without breaking up that dust mulch, and prevent the tremendous evaporation which takes place from a saturated surface until cultivation arrests it by restoring the dry-earth mulch, we will accomplish the desired result of putting the water into the land, instead of upon the land.

**DEEP FURROWS.**—As the result of discussions I heard at Farmers' Institutes, I have changed my method of irrigation. I plowed but one furrow in the center of the rows of my orange orchard, plowed it as deep as I could get it with a hand walking plow, and then took a "bull-tongue" attached to a plow beam and cultivated in the bottom of the furrow as deep as I could get it. This year I have a large subsoil plow which I am using.

Instead of running several streams near the surface in each row space, I ran but one in the subsoil, and I had water enough to put one stream in every row space of my orange orchard at the same time, with a small amount of water running over at the lower ends. As my orchard is on the hillside, the water, after running through the furrows of the orchard, was at the upper side of the peach orchard. Here the overflow was again gathered and diverted between the rows of the peach orchard, prepared also with single deep furrows, and the overflow from these furrows was run on my alfalfa.

In these deep furrows the water was left running eight days, as I had the continuous flow of water for that time. By my old method of irrigation I would have had no water for my peach trees or my alfalfa. I kept up the same method after the fall and winter rains.

**THE RESULTS.**—When I hauled my oranges to the packing house the foreman weighed the first four-horse load, and examined the scales to see if they could be right. When I brought the next load he admitted that he had reweighed the first load to see if he had made no mistake, and found they weighed the same as they did the day before. One of the workmen told me afterwards that they weighed a number of packed boxes and they weighed five pounds heavier than any other oranges in the house.

**COMMENTS.**—This year I have only 1 inch of water, but with this system my oranges are larger and finer than I ever had when I had my full amount of 4 inches.

My vineyard is underlaid with a tough, tenacious clay, through which the water percolates slowly, and by surface irrigation the top is saturated, but not the bottom. I had even more marked results with grapes than with the oranges. I had a good crop of grapes on vines that I pulled the grapes from last year to save them from dying.

With this system we can draw the roots downward, where they should be. If they insist on coming near the surface, use a weed cutter or plow and cut them off. I am confident that my place is enhanced in value fully 50% by the employment of this method of irrigation.

**GASOLINE ENGINES** are made that supply power at one-tenth of a gallon of gasoline per H. P. per hour. They are economical motors in any country, and invaluable where water is scarce.

## THE POULTRY YARD.

### More Profitable Poultry.

From a paper by C. A. BABCOCK, JR., of San Diego at the University Farmers' Institute at La Mesa.

I am not going to give advice at this time to the poultry man or man who makes poultry keeping a specialty, for most of you only keep poultry as a side issue. Nor shall I address persons who pass this subject with "hens don't amount to nothing." They can take care of themselves, as they seem to be able. But to those who care to put a little extra thought and labor into the business I will make a few suggestions.

I average 24 cents a dozen for all the eggs marketed the year round from my place. We will suppose the average farmer who is farther from the market gets only 20 cents a dozen. It costs between 90 cents and \$1.25 a year to keep a hen in this country, according to the kind of fowl kept. I can keep a White Leghorn from the time she is six months old until she is one year and six months old for 90 cents to \$1. We will suppose it costs the average rancher as much, which I doubt. It will take five dozen eggs at 20 cents to pay for the keep of the hen—that is, sixty eggs. Now the question is, How much more than sixty eggs will the hen lay? That is not exactly the question, for those hens might take a notion to lay in the spring of the year when eggs are worth 12½ cents a dozen. This brings me to what I wish to say above all other things.

**THE PROFITABLE LAYING SEASON.**—To make a good profit, hens must lay from October 1 to February 1. I have watched egg records from Eastern poultry plants and have spent much time figuring my own record, and they tell a story that can not be disputed.

First—Pullets lay from forty to eighty eggs more in twelve months—beginning September 1 or October 1—than do old hens. The lesson is to dispose of old hens and hatch new stock every spring. Old hens will sell for what it cost to raise them to laying maturity.

Second—Pullets hatched about March 1 and not later than March 10 will lay in September, and will pay a profit of 50 cents more than April pullets, because the latter will not lay until October and perhaps November, while May pullets will not be well started laying until December.

I am talking about the average hen, not somebody's record-breaker that laid at four months old. The average pullet will lay fifteen eggs a month from October 1 to February 1, which makes a total of sixty eggs at 30 cents a dozen, or \$1.50. This is from March-hatched pullets. The April-hatched pullet will not lay until a month later—a loss of fifteen eggs, or 40 cents.

We have not taken into consideration the fact, which I think I have proved at my place, that early hatched pullets mature younger than late hatched ones. The reason for this may be that the first broods get all the worms and the best care.

**TO GET GOOD HENS.**—Breed from your best layers and obtain a better average lay than fifteen eggs a month. My pullets all averaged better than fifteen eggs a month in the fall, but I thought the ordinary farm-raised pullet would lay fifteen eggs, so I placed it at that. Here are the points for good fall layers: Pullets hatched March 1; ancestors were hatched early; plenty of good food and water; no lice; watchful care.

All I have said will go for naught if you say to yourself, "It is too much trouble." Just let me trouble you with a few more figures. A hen lays 120 eggs in twelve months, or ten dozen. I doubt if the average ranch hen does even that. Ten dozen at 20 cents is \$2. The cost of the hen's keeping is \$1, which gives \$1 profit. Take the contrast: Pullets hatched as above prescribed, laying 160 eggs in twelve months, or 13½ dozen at 20 cents, worth \$2.66; subtract cost of keeping, \$1; profit, \$1.66. In addition to this you must remember that those extra forty eggs which the pullets laid more than the old hens were laid mostly in the fall when eggs were 30 cents a dozen instead of 20 cents, which would make the difference greater than 66 cents. Suppose the flock of hens numbers thirty, there is a difference in profit of \$20.

You have been to a little more trouble and labor, but I notice the average rancher goes to quite a bit of trouble over a great many things about his place. I see a prospect of a good egg market at San Diego, and I believe the small flocks of hens kept about the orchards of the county would bring a much larger return to the owners if better managed. I do not think I am telling you anything beyond what most ranchers could do.

So many people have figured out on paper the profit on poultry, and found when they tried to put it in practice that it would not come true, that I have purposely used in this article figures which are under what I know to be possible. The only figure at all questionable is the yearly average of 20 cents per dozen, for some ranchers do not obtain it. The reason is that their hens do not lay in the fall, as they ought to do. I have addressed those who are interested in making their hens pay a larger profit, and who are ready to spend time, patience and thought in the business.



## THE VETERINARIAN.

## Black Leg and Its Treatment.

TO THE EDITOR:—I don't think I ever see anything in the papers on black leg but what speaks of it as being incurable and highly contagious, and that vaccine is a sure preventive. Now, I had had some contrary experience, and during a recent scare I went to Visalia to get the ideas of some of the leading cattlemen of the seat of the cow country. There were not a few, if not a preponderance, who are of small faith in vaccine, and very doubtful if black leg is a contagious disease. Three of them, besides myself, had heard stories of cures after the animal had been attacked. One large cattle raiser gave it another name, which suggests both preventive and cure, viz., "stagnation of the blood." This view suggests the efficiency of exercise. Have a good-sized range, as far as possible from water; and if you can't have this, keep them up a night, for in a too rapid increase in either fat or lean animals there is danger.

While I hope vaccine may be infallible, still I think it ought to be proven in some government herd that has it, and not changed to other pasture and everything else done that can be thought of, and then give vaccine the credit. I don't like to hear people say, "I vaccinated and did not lose any," or, "I vaccinated and moved my cattle and lost no more," as sure proof of the value of vaccine. I have raised cattle here for twenty-four years. Black leg appeared twice, but only once did I lose any cattle. Now, then, if I had vaccinated for the past five years, and should say I never had it since I began vaccinating, it would give a very erroneous idea, for I have not vaccinated and have not had it, either.

As to what I did when I thought I cured some: One day I went out among my cattle and, finding three young animals stiff, I thought it must be black leg. I at once turned them into a field of soft alfalfa, hoping they would eat it and be physicked. I had little hope at that time that it was curable, so I thought the change of feed would be all I could do; but one of them was so sick I could approach it, so I hurried home and made a pill of garlic, asafoetida and saltpeter, and there in the open field I kept up with it until I got the pill into a slit I had cut under the root of the tail and tied a cloth around to keep it there. None of them died and no more took it.

Everyone can draw his own conclusions—I merely state the facts. There are a great many here who don't vaccinate, and either we who don't or those who do are making a great mistake. The purpose of this article is to encourage a proper test, for the cost of vaccination is not to be compared to the work of giving them exercise. But to vaccinate, I have no faith in it, and to still keep up the exercise is too much. H. E. DYE.

Tulare, Cal.

[Written for the PACIFIC RURAL PRESS.]

Does black leg vaccine protect against black leg? While the general consensus of opinion among cattle raisers, especially those who are located in what are called black leg districts, appears to be that vaccination with a reliable vaccine or virus will protect calves against black leg, yet there exists a small minority who are not willing to concede this fact and who not only doubt the effectiveness of vaccination, but appear to think that the disease is non-contagious, and is due to a plethoric condition of the blood caused from a too abundant diet. We think, however, that a careful consideration, pro and con, of all the evidence at hand on the subject, will be sufficient to convince the impartial observer as to the merits of the Pasteur system of vaccination to prevent black leg. In order to fully appreciate the benefit which the cattle industry has derived from the adoption of this method, it may be perhaps as well to review the situation as it existed prior to its introduction into this country.

We find that black leg was very generally met with throughout the cattle-raising States of the West, that in certain parts of Texas and Colorado the annual mortality averaged from 10% to 40%, and that almost every State west of the Missouri river contained certain portions where black leg was a common visitor. The disease was classed by cattle raisers among the necessary losses incidental to stock raising and one which appeared to be unavoidable. Many methods were practiced such as roweling, the insertion of medicines under the skin, bleeding and violent exercise. We think we can safely say that neither of these methods resulted in any material benefit and the fact that they were employed was because in those days, and perhaps even at the present time, many of the cattle raisers were ignorant as to the cause of the trouble. The fact that the moving of cattle from one pasture to another would frequently stop further losses from the disease, should have been sufficient evidence that the cause for the same existed in the pasture. This appears, however, to have been overlooked. To those who think that the disease is not contagious in character, we can only point out the fact that it is possible to make cultures from the blood of affected animals, which, by inoculation into healthy ones will produce the condition in them also. It is hardly necessary, however, to argue on this phase of the subject. The disease germ responsible for black leg was discovered over sixteen years ago and it was thoroughly proven at that time that the disease could not exist unless this germ was present in the subject. When an animal dies from black leg, in the majority of cases the carcass is allowed to remain in the pasture, this explains how the pastures become infected. Grazing cattle in such pastures naturally exposes them to this infection, which is liable to gain access to the system through an abrasion of the skin or by being taken into the

system with the food. The reason why cattle which are rapidly gaining or are in a plethoric condition are more subject to the disease than the others, is that the blood of the animal when in this condition is better fitted for the rapid multiplication of the germs. However, cattle which are not in good condition are by no means exempt. Black leg is particularly a calf disease and as such can be likened to such diseases as scarlet fever and measles which are common affections of children but which rarely affect grown people.

Black leg was formerly a common disease in Europe, having prior to 1884 been considered but a different form of another very fatal and destructive affection, called anthrax, and it was owing to Pasteur's discovery of anthrax vaccine, which, while it effectually prevented anthrax, had no influence on the development of black leg, that the difference between anthrax and black leg became recognized by investigators. In 1884 three eminent French scientists named Arloing, Cornevin and Thomas discovered black leg vaccine virus and after testing it in every practical manner, both in the field and laboratory, it was placed before the cattle raisers of Europe. Accurately kept statistics in France prove that where vaccination with this virus was adopted the mortality from the disease was reduced to a minimum, and we find that in the following ten years its use became very general throughout Europe and in all districts where this disease formerly claimed its quota of victims.

In 1895 the Pasteur Vaccine Company introduced into North America the original vaccine which is prepared in France. On its being put to severe practical tests, its merits rapidly became recognized. We find in a great number of cases where only part of the herd was vaccinated, and they all ran together in the same pasture, that none of the vaccinated calves would die, while the mortality among the unvaccinated would remain the same as formerly. This having occurred in many instances, should certainly be sufficient evidence to convince an impartial observer as to the merits of the operation. The fact that it has been made the subject of special inquiry by the U. S. Department of Agriculture and different experiment stations which unanimously endorse the method, should be sufficient evidence as to its efficacy. It is a fact that owing to the success of the vaccines prepared in France, and which are known under the name of Pasteur vaccine, that other preparations have been offered to the public which have not been used with the same success. This, of course, was to be expected. The cattle raiser, however, can always protect himself by using due care when purchasing his vaccine.

## THE DAIRY.

## Mesquite Grass at the North.

California dairymen in our upper coast counties, who have found what is locally called mesquite grass (*Holcus lanatus*), useful for pastures, will be interested in its success farther north. The Northwest Horticulturist says that, as a profitable grass for uphill lands, it is fast gaining favor among stock raisers in Washington and Oregon. This grass, at the same time, is taking the meadows and in many places killing out the other grasses. It has been more noticeable this season than ever before; perhaps on account of its spreading nature. On the side streets and top hills in large cities in Oregon and Washington it has almost taken the entire roadsides. Judging from the fact that it can grow on such poor soil, it would be well, possibly, to sow it more extensively on the burnt off places on hill sides and on the mountains. Compared with other grasses, J. R. Springer, an old resident of Oregon, states in the Oregonian that he is convinced that location and what is wanted of a grass determines what should be sown. He says: No one wishes to dispute the nutritive qualities of standard grasses, such as orchard grass and timothy, and where they can be grown successfully they are hard to beat for many purposes; but in the foothill regions of the Cascade mountains, as far as my knowledge extends, they do not last with mesquite. I sowed all three kinds eight years ago, and the mesquite is here still, doing better every succeeding year. All others are gone.

Now I have this to say in regard to the mesquite grass for hay and pasture: it can not be beaten for the purpose we use it for, and that is general stock-raising. First, there is no kind of hay that is better adapted to feeding to young stock or milch cows during the winter, and for winter pasture it is worth about the same as the hay that can be cut. As soon as rain comes the grass starts and grows all winter. Of course, orchard grass never stops growing, but stock like it so well during the growing season that if there is not an abundance of it they will eventually eat it out. The same is also true of timothy. But mesquite during the growing season develops a velvety, fuzzy formation on the leaf, that is its protection from stock. They don't like it so well till it heads out, and then they will eat it close to the ground.

Cattle on mesquite pasture will keep spots eaten

close, and they do well on it, provided there is plenty to range over and plenty opportunities to secure such spots. The writer seeded forty acres to grass last fall. Only four acres were put to timothy, the rest to mesquite, and I don't think I have made a mistake. I only sowed the timothy to lengthen out the hay harvest. Timothy is too binding in its nature for stock. It has been demonstrated that young stock will not winter on it, as a large per cent die from costiveness. There are a number of stockmen in this section that have had years of experience with many kinds of grasses, and their experiences are generally outlined in this article. All I have talked with on this subject are unanimous in favor of mesquite. I have written this for the reason that it is a grass that seems to be discredited by many, and many seem to go out of the way to speak disparagingly of it. I have a catalogue for 1900 which says: "It possesses little nutritious value, and its cultivation is not recommended." The experience of the foothill stockmen is diametrically opposite.

Now, as my experience only extends to the small space of nine years in this State, I will say I have been talking this matter over with stockmen ever since I came to Oregon, and with their statements and my own observation I have evolved this article for the consideration of all similarly situated as the writer.

## MISCELLANEOUS.

## Metric System and Equivalents.

## MEASURES OF LENGTHS.

1 millimeter =	0.001 meter =	0.0394 inch.
1 centimeter =	0.01 meter =	0.3937 inch.
1 decimeter =	0.0 meter =	3.937 inches.
1 meter =	1. meter =	39.37 inches.
1 dekameter =	10. meters =	393.7 inches.
1 hectometer =	100. meters =	328 feet 1 inch.
1 kilometer =	1000. meters =	3280 feet 10 inches.
1 myriameter =	10000. meters =	6,2137 miles.

## MEASURES OF VOLUMES.

1 milliliter =	0.001 liter =	0.061 cubic inch.
1 centiliter =	0.01 liter =	0.6102 cubic inch.
1 deciliter =	0.1 liter =	6.1022 cubic inches.
1 liter =	1. liter =	0.9081 quart.
1 dekaliter =	10. liters =	9.081 quarts.
1 hectoliter =	100. liters =	2 bushels, 3.35 pecks.
1 kiloliter =	1000. liters =	1.308 cubic yards.

## WEIGHTS.

1 milligramme =	0.001 gramme =	0.0154 grain.
1 centigramme =	0.01 gramme =	0.1543 grain.
1 decigramme =	0.1 gramme =	1.5432 grains.
1 gramme =	1. gramme =	15.432 grains.
1 dekagramme =	10. grammes =	0.3527 ounce.
1 hectogramme =	100. grammes =	3.5274 ounces.
1 kilogramme =	1000. grammes =	2.2046 pounds.
1 myriagramme =	10000. grammes =	22.046 pounds.

## METRIC AND ENGLISH EQUIVALENTS.

Inches	millimeters ÷ 25.4
Feet	meters × 3.28089
Yards	meters × 1.09363
Miles	kilometers ÷ 1.6093
Sq. In.	sq. millimeters × .00155
Sq. Ft.	sq. meters × 10.7643
Acres	sq. kilometers × 247.114
Cu. In.	cu. centimeters ÷ 16.3862
Cu. Ft.	cu. meters ÷ 35.31658
Lbs. avoirdupois	kilogrammes × 2.2046
Tons (2000 lbs.)	kilogrammes ÷ 907.18
Lbs. per foot	kilo. per meter × .67196
Lbs. pereu. ft.	kilo. per cu. meter × .06243
Sq. millimeters	square inches × 645.137
Square meter	square feet × .0929
Grammes	ounces × 28.4595
Grammes	pounds × 453.5926
Kilogrammes	pounds × .45359

THE Supreme Court of California has decided that "an appropriation of water by means of a ditch is not measured by the capacity of the ditch, but is limited to such quantity, not exceeding its capacity, as the appropriator may put to a useful purpose; and no matter how great in extent the original quantity appropriated may have been, any amount less than the whole amount appropriated which has not been devoted to a beneficial use within five years is lost and forfeited as against a subsequent appropriator thereof."

AGRICULTURAL PATENTS obtained between 1866 and 1872 were granted subject to the condition of the extralateral right attached to an apex in adjoining mineral land. The right of the holder of a valid lode location to follow the dip of the vein into adjoining agricultural land has been passed on adversely by a U. S. circuit judge, but the question has never been decided by the U. S. Supreme Court.

A CEMENT for a crack in an iron tank is made as follows: Five parts brimstone, two parts black lead, two parts sifted cast iron filings; melt together (taking care that the brimstone does not catch fire); have the crack absolutely dry; heat the damaged part with a red-hot piece of iron; heat the cement in a molting ladle till soft; then apply.

ALL money orders may be cashed at any money order office at which they may be presented, irrespective of the office on which they are drawn. In all cases the owner must be identified. At the office on which a money order is drawn the order must be cashed as soon as it is presented, even if the advice has not yet arrived.

A CUBIC FOOT of air temperature 56° F., barometer 30 inches, weighs .077 pound; at 80° F., barometer 31 inches, it weighs .076 pound.



## Agricultural Review.

### ALAMEDA.

**HEAVY DAMAGE FROM WIND.**—Niles Cor. Oakland Enquirer, Sept. 28: The hot north wind that came up suddenly on Thursday evening last caused the almonds, walnuts, apples and late pears to be shaken off of the trees, doing much damage to the last-mentioned. The wind for a short time had a velocity of over 60 miles an hour, and the air was full of dust, which made it quite uncomfortable to those who happened to be out late that night.

### CONTRA COSTA.

**LARGE RANCH SOLD.**—Martinez Press: The sale of the extensive Los Medanos rancho took place last Saturday, the highest bid being \$170,000. There are 8000 acres in the ranch, and it is one of the finest properties in the county. The price paid for the ranch was \$25,000 above the mortgage and interest due. A Mr. Perry is reported to have been the purchaser.

### COLUSA.

**OLIVES A SUCCESS.**—Colusa Sun: In a few years the Sacramento valley will be producing more olives than all the balance of the State. They prosper magnificently around Oroville and they are now produced there by the carloads. There are 2000 acres planted in Maywood colony at Corning and some of the trees are now in bearing. The olive bears well anywhere in the Sacramento valley, and that is more than it will do at all places. Any of our good land will make salable olives. Those grown at Woodland, but little above tide level, are very rich in oil.

**WILL PRUNES PAY?**—Colusa Sun: W. C. Roberts informs us that from his three acres of prunes he sold over twenty-one and a half tons of green prunes at \$12 a ton, and that it cost him \$3 a ton to deliver them, leaving him \$9 net. This is over \$63 an acre net. Mr. Roberts has a fig orchard also, and he thinks more of it than of the prunes. He has just completed gathering all he will gather, and he has now put some bogs in to gather whatever comes later, and they will be dropping until frost.

### HUMBOLDT.

**CREAMERY PRICES.**—Arcata Union: Although milk continues to fall off somewhat, the prices for butter fat still continue to rise. The prices paid on Sept. 15th are the highest this year, with the exception of January, when 27 cents was paid. The Eel river valley creameries paid last Saturday as follows: Cold Brook Creameries, 24¢; Grizzly Bluff, 24¢; Cold Spring, 24¢; Eel River, 24¢; Excelsior, 24¢; Red Poll, 24¢; Loleta, 24¢; Riverside, 24¢; Ferndale, 24¢; Crown, 24¢; Andreason, 24¢; Abrahamsen, 24¢; Cream Valley, 24¢; Sunset, 25¢; Capitol, 24¢. The creameries in Arcata paid as follows: Arcata Creameries, 23¢; Silva, 23¢; H. & S., 23¢, and Minor, 23¢.

### LOS ANGELES.

**SAN DIMAS LEMON ASSOCIATION.**—Pomona Progress, Sept. 27: For some time an exclusive lemon association has been talked of at San Dimas. It is finally organized, and articles of incorporation will be filed this week. These directors were elected: L. C. Meredith, J. A. Johnstone, C. B. Sumner, E. M. Wheeler, E. J. Fleming. The board will organize next week. Land has been purchased just west of the San Dimas Citrus Union packing house, the intention being to erect a packing house to cost from \$2000 to \$2500, with all the conveniences for handling lemons.

### MENDOCINO.

**BIG HOP PICKING.**—Ukiah Dispatch-Democrat, Sept. 28: The biggest hop picking of the season by a single picker, in this valley, was done at Dolph's Fork, on the old Piter place, by Frank Walker of Stony Ford, Colusa county, who picked in one day 425 pounds. In the same yard, on the same day, Miss Tillie Weselsky picked 347 pounds. Frank Walker averaged over 300 pounds a day for the whole season.

**CHOICE PRUNES.**—Healdsburg Enter-

prise, Sept. 29: Sberman Peterson, inspector for the California Cured Fruit Association, returned last Friday from a trip through Mendocino county. Mr. Peterson reports the prunes grown in the Hopland and Mendocino districts as being the finest he had ever seen. He brought down some samples with him, both green and cured, and they are certainly very fine. Mr. Peterson states that he visited a large number of orchards in the vicinity of Ukiah and speaks very flatteringly of them all, but said he desired to make special mention of J. C. Ruddick, Judge McGarvey and Prof. Babcock. He also praises the Hopland growers on their thorough work.

### NAPA.

**AT THE WINERIES.**—Napa Register, Sept. 28: At the Migliavacca cellars crushing has been going on for some time. The most of the grapes come from Santa Rosa and the grower is paid from \$16.50 to \$18 per ton for them. A scarcity of pickers is reported there at present, but as soon as sufficient help can be obtained Mr. Migliavacca expects to receive seven or eight carloads a day from that vicinity. At the California Wine Association's cellars in Napa grape crushing was commenced Sept. 11th. The first they are working upon came from Napa valley and is fine in quality. They are paying from \$15 to \$20 a ton.

### ORANGE.

**A BUSY CANNERY.**—Anaheim Gazette, Sept. 27: The cannery is operating on tomatoes, of which the crop is turning out well. Upwards of a million and a half cans of fruits and tomatoes have been put up this season.

**RAISING PEANUTS.**—Anaheim Gazette: Mr. Terry has raised on his place east of town four acres of very fine peanuts, which he is now gathering. The nuts are large and sound and the crop promises well. He expects to harvest 100 sacks of forty pounds each per acre, and will next year go into the business on a larger scale. Mr. Terry is of the opinion that there is money in farming, if one goes at it in a business-like manner. Too many failures are attributable to the lack of business methods in farming, and these the successful business man guards against. He says it is no trick at all to raise fine peanuts, and judging by the nuts already harvested he has a bright future before him in their culture.

**INCREASED BEET PRICES.**—Anaheim Gazette: Senator Jones, representing the American Beet Sugar Co., has forwarded the following circular of instructions to the beet farmers of Orange county: "American Beet Sugar Co., Chino, will pay the following prices for beets, to be contracted for now, for the crop of 1901: For all sound beets weighing not over five pounds the minimum price will be \$4.25 per ton, regardless of sugar contents or purity. If beets, however, go high in percentage of sugar, an advance of 25 cents per ton will be paid for each per cent above 15%. If you wish to plant next year, please send your application by mail to the undersigned as soon as possible, or call at his house, and he will examine your land. Seed will be furnished after ample rain has fallen." This is a very substantial increase over the old rate, which was \$2.50 for beets of 12% sugar. Beets of 10% sugar brought only \$2. A reduction of 75 cents was made for each percentage under 12. In the coming year there will be no such penalty. A \$4.25 beet polarizes 15% sugar. An increase of 25 cents is added for each percentage over 15. In the season of 1897 the American Beet Sugar Co. paid \$175,000 to Orange county beet raisers. With the return of the average rainfall we may reasonably expect to see resumption of beet culture on the proportions formerly characterizing the industry.

### SACRAMENTO.

**FRUIT SALES AND SHIPMENTS.**—Sacramento Bee, Sept. 29: Table grapes now make up more than half the fruit going to the Eastern markets from northern and central California. Practically all the deciduous fruit shipments from this State are from these two main divisions, and reach their destination by way of the Central Pacific. There is ordinarily a good deal of deciduous fruit grown in southern California, but it is nearly all either dried or canned, very little being shipped in a fresh condition to the East. This season the peach crop of southern California was a failure, and the apricot crop was disposed of by drying. The records of Secretary Maslin of the Fruit Growers' and Shippers' Association show shipments during the week ending at 6 A. M. to-day, over the Central Pacific, as follows, the figures denoting carloads: Peaches, 1½; plums, 1½; pears, 47; grapes, 94; apples, 34; quinces, 3½; mixed, ½. Total, 182 carloads. The total of the deciduous fruit shipments to date this season is 5641 cars, against a total of 5907 cars to the corresponding date last season—a decline of 266 cars.

The apples are all going to points west of Chicago. Shipments of Newtown Pippins to England have not yet begun.

### SAN JOAQUIN.

**LARGE DAIRY RANCH.**—Stockton Mail, Sept. 27: Francis Hodgkins has purchased a half-interest in the old Johnson home place, 1½ miles from Lathrop, consisting of 750 acres. The purchase was made from James H. and John E. Budd, who retain the remaining half-interest. Four hundred acres of the tract consist of bottom land on the San Joaquin, covered largely with good pasture grass. The tracts not already suitable for grazing will be planted to rye grass and other feed for stock, and the place will be converted into a large cattle pasture and dairy. Fifty or sixty cows will be put on the ranch to start in with, and the dairy will be enlarged as the business increases.

**FORTY-TWO CARLOADS OF FRUIT.**—Lodi Sentinel, Sept. 29: That is the record for this week's fruit shipments, and it is one of the banner weeks of the season, if not the best week yet recorded. Grapes and watermelons have comprised the record breaker, and there will be no let up for another week, if the weather keeps its promise of hazy Indian summer. During the past week nineteen cars of table grapes have gone East, while the rest of the shipment was composed of watermelons and wine grapes. More watermelons are being shipped just now than at any other portion of the season, and most of them go direct to San Francisco, where the city people are apparently more hungry. Melons are always plentiful at this time of year, and it is a peculiar fact that one of any size at all is ripe late in September. The veriest tyro would have no trouble in picking out a fit melon now. For shipping they are not so fit as a month ago, and for eating purposes have lost only in firmness of flesh. Grapes, of course, are as fit in every way as ever, but the shipping season is almost over. Two weeks longer will see its finish. Owing to the grape season opening earlier this year, it will close just that much before its regular time.

### SANTA BARBARA.

**GOOD APPLE CROP.**—Lompoc Record: It is estimated that 100 tons of apples will be sold to local fruit peddlers this season. Santa Barbara, and even Ventura, is sending in for our choice wormless apples. This trade heretofore, which has been large, has not been taken into account when making up the output of our orchards, and, when added to the pack going out by rail, makes quite a protentious showing for this young but growing industry. It will not be more than a year or two before the output of winter apples will reach 100 carloads, or about 80,000 boxes.

**SUGAR BEETS.**—Lompoc Record, Sept. 29: Preparations are being made to commence work on the beets grown on the mesas. A spur of the railroad is being put into the fields to facilitate loading cars and to cheapen and expedite handling. No estimate has yet been given out as to the probable product of this section, but it will run well into the thousands of tons, sufficient when added to the beets produced in Santa Maria valley and Arroyo Grande to give the factory a fairly good season's run. Sugar being on the up grade in price, the season all through the country will be one of profit.

### SANTA CLARA.

**BIG PRICE FOR BIG PRUNES.**—San Jose Mercury, Sept. 27: Prune growers who have large sizes this season are fortunate, for sizes above the fours will bring big prices. The California Cured Fruit Association on Wednesday fixed the price of 30s to 40s at 10 cents a pound, and at a meeting yesterday they made a price on 20s to 30s of 15 cents a pound. The fine weather has given the growers an opportunity to clean up their crops in pretty fair shape, although the aggregate loss because of the unfavorable weather that hung on so long will be quite heavy. Prunes are coming into the Association warehouses more freely, and, as a rule, they are of better quality than the first curings. The weather continues to favor the growers, and before many days the entire crop, less the fruit that rotted upon the ground for lack of help in picking by reason of the cool, damp weeks that followed the first dropping, will all be under cover. In the meanwhile orders are coming in daily, and the fruit is being shipped out in larger quantities than ever before at this time of year. All this is encouraging, and it looks at present as though the crop would be disposed of at the prices named by the Association without much trouble, in spite of the large crops on the Pacific coast and in Europe. It will be gratifying to the growers to learn that President Bond of the Association states that the directors will be prepared to declare a dividend on the fruit sold just as soon as the computations can be made.

In this connection it may be again urged that growers should get their fruit in the warehouses as speedily as circumstances will permit, so that all orders may be filled without delay and the financial returns made so much the sooner.

**PRUNES ARE SMALL.**—San Jose Mercury, Sept. 27: President Bond of the Cured Fruit Association was in San Francisco yesterday, but will be back to his office some time this morning. The officers of the Association are convinced that the prune crop will be much less than has been generally believed. The crop will run much smaller in size this year than usual, and, as it is gathered, the Association officers are more and more convinced that it will be a smaller output than had been anticipated.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian, Sept. 27: Bellefleurs have been ripening early this year and now the Newtowns are coloring in some districts. Newtowns are being picked in some orchards in the eastern part of the valley. The pomace from the DeLong cider mill is being put on a patch of morning glory near Pajaro. If it can give that pest a knockout there will be no end to the call for cider mill waste. Packers are employing a number of outside teams to haul in apples from orchards. Toward evening the Lake avenue and Corralitos roads show long strings of wagons loaded with apples. Lompoc claims to be the wormless apple district of the world. Wait until packing houses become plentiful down there, and then the codlin will show up. The codlin is always on the hunt for apple orchards.

### SONOMA.

**HIGH-GRADE WINE.**—Sebastopol Times, Sept. 26: Wine making is now in full swing in Sonoma valley. So far the weather has been more than favorable for the vineyardist, and Sonoma valley's 1900 vintage will surpass that of former years in bouquet. The quantity, however, owing to the decreased vineyard acreage, will not be one-third of what it was ten years ago.

**HOP PICKING.**—Sebastopol Times, Sept. 26: Steve Meeker returned a few days ago from Hinkley's hop field, where he acted as yard overseer during the picking. He states that the crop was excellent and never before was such a successful run made. Many Sebastopolians were among the pickers and all made good wages. This is the first season during the past twenty years that the picking crew consisted entirely of white people.

### TEHAMA.

**IMMENSE PRUNE CROP.**—Observer: Max W. Muller of Tehama has the banner prune crop for the northern part of the State this year. He has three and a half acres of eight-year-old prunes, the crop of which last year sold for \$800. This year the trees were fairly loaded and the crop is worth about \$1400. Many of the trees bore over 400 pounds of fruit. Four hundred dollars an acre is a big amount to realize from a prune orchard.

## SCOTT'S EMULSION

of cod-liver oil is the means of life and enjoyment of life to thousands: men women and children.

When appetite fails, it restores it. When food is a burden, it lifts the burden.

When you lose flesh, it brings the plumpness of health.

When work is hard and duty is heavy, it makes life bright.

It is the thin edge of the wedge; the thick end is food. But what is the use of food, when you hate it, and can't digest it?

Scott's emulsion of cod-liver oil is the food that makes you forget your stomach.

We'll send you a little to try, if you like.  
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GOMBAULT'S  
**Caustic Balsam**  
A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. **SUPERSEDES ALL CAUTERY OR FIRING.** Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.  
**THE LAWRENCE-WILLIAMS CO., Cleveland O**



## THE HOME CIRCLE.

## The Return of the Quill.

William Dean Howells, instead of going forward to the typewriter, has gone back to the old-fashioned quill pen.—Literary Life.

Back in the dim-lit ages  
When literary sages  
Inscribed their classic pages with quaint,  
methodic skill;  
Their cumbrous tomes gigantic,  
Their treatises pedantic,  
And e'en their works romantic were writ-  
ten with a quill.

For poets dead and gone it  
Freed many a soring sonnet—  
A pen with feathers on it, sure, should  
help a rhyme ascend.  
But shadows thick environ  
The quill-writ verse of Byron,  
And nibs of tempered iron now their aids  
to poets lend.

In times remote and olden  
(Some say the age was golden)  
An author was beholden only to the hum-  
ble goose;  
But modern rules are tighter—  
Each present-day inditer  
A late improved typewriter needs to make  
his work of use.

Yet here's a man of letters—  
With few, if any, better—  
From whom Dame Custom's fetters have  
loosed their cunning hold;  
He's daringly decided  
To use, by genius guided,  
The pearly pen that glided o'er vellum  
leaves of old.

No more his hand prehensile  
Shall clasp a pen or pencil;  
He's chosen his utensil, and he'll wield it  
as he will.  
In spite of malediction,  
He'll cling to his conviction  
And manufacture fiction with a good, old-  
fashioned quill.

This notable example  
May prove a reason ample  
For other folk to sample the pen of long  
ago.  
That, in their varied phases,  
Portrayed Clarinda's praises,  
And winged the flowing phrases of Bun-  
yon and Defoe.

The peaceful quill's arrival  
May herald the revival  
Of tales which shall outrival the works  
we've read of late;  
The romance realistic,  
The novel pessimistic.  
The hero atheistic, may soon be out of  
date.

—Jennie Betts Hartswick, in October  
Century.

## Aunt Wing's Carpet.

A little brown house, standing knee-  
deep in waving clover, was the chief  
earthly possession of Mrs. Sarah Ann  
Wing, who washed, scrubbed and did  
odd jobs for Hurley.

Hurley had a big hill, a little church,  
a merry chattering brook, a sawmill  
and two immense boarding houses.  
There the upper ten and the lower ten  
dwelt side by side down the long,  
straggling street.

The little brown house stood off by it-  
self. It had once been the village  
schoolhouse. But with the sawmills  
and the church came the children, and  
now a big brick building looked down  
from halfway up the mountain, with  
big staring eyes on the meek little  
washerwoman and her home.

The truth was, the inflated town had  
grown ashamed of the shabby old house  
and the poor little old woman at the  
same time, and had introduced the two  
and united them with but scanty cer-  
emony and less legal authority; but  
that was of little moment to either of  
them—the town or the woman. It was  
not a present—a present, bless you!  
The little, apple-cheeked, blue-eyed  
woman had paid five round toil-dear  
dollars to have it hauled into the clover  
field, and a standing (or kneeling) bal-  
ance of yearly house-cleaning at the  
big farmhouse near by, for that privi-  
lege; and wasn't that a proper bar-  
gain?

She was proud of herself, proud of  
her house, and extravagantly proud of  
her parlor.

Why, of course, she had a parlor.  
The larger part of the house was cur-  
tained off and made sacred by a broken

whatnot, a topply centertable, and  
(last investment) a shiny, green sofa,  
not to mention a china dog with im-  
mense yellow eyes, a few pictures and  
a pretty pink sea-shell.

The great ambition of the little old  
woman's narrow toil-hedged life now  
was to possess a parlor carpet; not a  
strip or a rug, but a carpet long  
enough and broad enough to cover the  
entire space set apart for this sacred,  
natural piece of folly.

Into this sanctum the tired woman  
came for a few minutes every night,  
and maybe for a good half hour on Sun-  
day, just to rest. But as her only real  
visitor was Sister 'Lizabeth, and Sister  
'Lizabeth never came without one or  
two children, they visited in the  
kitchen, or, better still, on the door-  
step or over the clover-field gate.

She intended to use the parlor, of  
course, when it would be all fin-  
ished, the carpet down, and the muslin  
curtain up; then the lamp  
would be set on the centertable, and  
sometimes even—she would, maybe—  
if 'Lizabeth ever came without the chil-  
dren, have tea in there, and use the  
very best cup and saucer now on the  
upper shelf of the rickety whatnot.  
Then 'Lizabeth might sit (if it was not  
a dusty day) on the lounge and rest her  
weary back against its big comfortable  
arms. She meant to enjoy the parlor  
"some day," but of course, not before  
she had a parlor carpet.

In the hope of this "some day" she  
had saved up bit by bit, for the wear-  
ing, and sewed away night after night  
at the many colored rags for the pre-  
cious carpet.

The day had been intensely hot, and  
she had washed steadily from early  
morning until evening at the big red  
boarding house, but now in her soap-  
puckered hand she held a crisp new  
dollar bill, and her heart was over-  
flowing with joy.

"I ken put all this inty the mug, I  
ken; I don't need nothin' jus' now, 'nd  
I'll have 'nough for the carpet with  
this," she chuckled, smilingly, to her-  
self, as she walked around to the back  
door to avoid taking dust into the sac-  
red room.

She took down the yellow and blue  
mug and counted out the bits, and then  
wrapped them up tenderly in the new  
bill, and hid the mug in a fresh place  
for safety.

She peeped in beyond the screen  
and half shut her eyes to speculate—  
"I wonder how it'll look to come of a  
night and a carpet on th' floor. I'll  
make me a red mat out o' that old pet-  
ticoat Mrs. Mason gi' me, and won't it  
be cosy of an evenin', th' lamp lit, 'nd  
Dan asleep on the lounge. My, my, I'll  
be somebody then. I think I'll run the  
stripe long ways, it'll show off th'  
feather stripe best. It hardly seems  
possible I can have it; but I can, and  
mebby a rocking chair, too. What  
think o' that, Dan?"

"Meow—ow!" said Dan, clawing  
viciously at an old trunk which served  
as larder and cupboard, but his mis-  
tress took the top off a seeming otto-  
man, and gazed lovingly at the many  
colored balls hidden there just as she  
always did of an evening—it seemed to  
rest her.

A neighbor opened the door without  
knocking and came in, as close neigh-  
bors do.

"It's just me," she said laughing, "I  
came to borrow yer tub. Oh, them's  
yer carpet rags! My, how bright they  
look and so fine, too. I need a new  
carpet; I'd give you twenty cents a  
ball for um. I hate sewing rags." But  
the owner shut down the lid with jeal-  
ous haste.

"I couldn't sell 'em," she said, with  
a little gasp. The bare possibility of  
her rags, her precious time-gathered  
treasures, on the floor of a common  
boarding house, and under the careless  
hob-nailed boots of rough shanty men;  
it seemed like a sacrilege.

Again she raised the lid and took out  
a ball in half apology for her seeming  
rudeness. "Y' see, these are all I've  
got of lots o' bits—here's a bit o' John's  
shirt, 'nd my weddin' dress; here's  
'Lizabeth 'nd Carrie's, 'un dear little  
Edith's—you mind m' little girl?"

"Oh, no," said the neighbor, kindly,  
"you couldn't sell 'em. Only y' kuow

a bought carpet 'd wear long enough  
for you, 'nd 'd look a sight better. But  
I must go. Good night to y'—it looks  
like rain."

"Th' idea!" snapped the little wo-  
man, as soon as she was alone. "Th'  
idea! twenty cents a ball for them  
rags."

"Meow—ow—ow!" cried poor Dan,  
looking up wonderingly.

She prepared a tasty little supper—  
a boiled egg, a slice of toast and a de-  
licious cup of strong black tea, and she  
and Dan enjoyed it as only poor  
hungry creatures can.

After the meal, she and Dan sat idly  
on the doorstep, enjoying the coolness,  
and wishing mildly for rain. She was  
very tired, but was too happy to rest.

"B'lieve I'll go down 'nd tell 'Liza-  
beth; I know she'll be right glad too,  
though we don't 'gree 'bout carpets. I  
think a stripe's just the makin' o' a  
rag carpet, 'nd she sticks for 'hit 'nd  
miss."

It was growing cooler now. The air  
was full of pleasant evening sounds;  
frogs and lizards, restless birds, cow-  
bells, dogs, and shouting children; each  
filled in their part in nature's concert,  
while over and above all was the sigh-  
ing and sougling of a coming summer  
shower.

A big-hearted, generous and hope-  
lessly prolific woman was Sister 'Liza-  
beth, whose purse was scandalously  
small, as her family was scandalously  
big. She had ten living children, and  
if Providence had sent her ten more,  
there would have been ample room in  
her heart (if not in her house or around  
her table), and little "twenty-one"  
would have been welcome as was  
"Baby Nina."

She sewed, baked, washed, scolded  
and spanked for them all, and loved  
them as the joy and sweetness of her  
life.

Eight small curly heads bobbed  
around the pine table, and eight small  
mouths called out—"Me some, me  
some,"—as their plates crowded  
evenly around a big pan of potato  
soup standing in the middle of the  
table, from which the mother dished up  
cupful after cupful of the steaming  
broth into plates—returned almost as  
soon as filled—empty. All the children  
talked as fast as they ate, and the  
mother's plaintive scolding was only  
one more voice in the general uproar.

"Tom, keep your hands off the loaf  
—do—oh, Harry, look at your coat;  
for shame, a big boy like you. Master  
Jack I'll whip you now—Carrie, for  
pity's sake take this child and try and  
quiet her, I'll go wild!"

A tall awkward girl—Carrie—took  
the wailing infant from her mother's  
arms, and carrying her to the window,  
began to tilt back and forth in a bark  
seated chair. She hummed a low minor  
song, and with her face well hidden on  
the baby's unconscious breast, drenched  
its far from immaculate gown with  
great bitter tears. She saw her aunt  
coming, with Dan at her heels, picking  
out the best spots along the street;  
but Aunt Wing was no friend of hers;  
unless one can regard as one's best  
friend the person most energetic in  
pointing out one's faults and failings.

Carrie was quite mortal, and her  
heart was unusually sore to-night, so  
instead of waiting to receive the visit-  
ors, she gather up the little comfort-  
ing bundle in her arms and slipped  
out the side door, into the cool night  
air.

Mrs. Wing stood looking hopelessly  
from one to the other. She did not at-  
tempt to speak, for nothing short of a  
steam whistle could be heard above the  
noise around the soup pot. She re-  
fused by a quick sign, the cold, sloppy  
cup of tea Sister 'Lizabeth hastened to  
offer her, and went over as if to take  
the baby from the cradle. Dan sniffed  
into the cradle and then curled himself  
up on the baby's pillow and slept.

It was some time before the meal  
was over; but once it was, the children  
were glad to scamper up to bed, fairly  
tired out with play.

The visitor looked at them in helpless  
dismay. Several times she opened  
her mouth to tell 'Lizabeth about the  
carpet, and just as often she had to  
shut it. Finally, however, as the last  
pair of brown legs vanished into the

loft above, she managed to gain the  
mother's attention long enough to shout:

"Got enough for m' carpet at last!"  
"Oh, that's good—Johnny, I'll whip  
y', mind—How'll y' do it?"

"Stripe; a wide feather stripe o'  
red 'nd white 'nd green 'und—"

"Oh, I like 'hit 'un miss, 'it's easier  
—Johnny now! Wait till I 'tend to  
Johnny—bother take that boy!"

In a few minutes 'Lizabeth returned  
breathless and excited, but then the  
carpet was forgotten. Carrie was  
crooning a pretty baby song to the  
fretful child, and her young voice was  
very pleasant and full of sweet, clear  
beauty.

The mother listened, and her face  
grew tender.

"My heart fairly aches for poor  
Carrie," she said.

"Carrie! What on earth ails Car-  
rie?"

"O, it's her eyes, poor child; I never  
knew until to-day how she felt about  
them."

"What about her eyes, 'Lizabeth?"

"Why, of course, you know how  
crooked they are."

"Pshaw! I never noticed them  
much."

"Oh, Sar' Ann!" There was a  
world of wonder and pain in the  
mother's plaintive voice.

"It's all nonsense, 'Lizabeth, you  
just humor and pet her too much, I  
say!"

The mother lifted a little ragged coat  
from the floor and proceeded to mend  
it. The baby had stopped crying, and  
even the rioters upstairs had gone to  
sleep. Only the girl's low, sweet song  
and her continuous tramping could be  
heard. The mother's eyes were red  
when she spoke again, although she  
kept back the tears.

"There is a great eye doctor—a  
speshulist—they call him, and he of-  
fered to perform an operation—think  
of it—the poor child went to see him  
herself; never said a word to me. He  
felt sorry for her, he said he'd perform  
the operation for ten dollars. He ex-  
amined her eyes and he'd have to have  
glasses ground 'specially for her. But,  
dear me, what's the use o' talkin'. It's  
hard 'nough to get enough to eat, let  
alone anything else."

"I should think so," sighed Mrs.  
Wing agreeably.

"He'll only be here this week, and  
then her chance 'll be gone forever—  
mebby."

"Such nonsense, 'Lizabeth. Ten dol-  
lars 'd be a heap o' money for people in  
your circumstances t' pay out, 'nd just  
for pride, too."

Aunt Sar' Ann always imagined her-  
self quite well off when talking to her  
sister. 'Lizabeth alone had circum-  
stances—noisy children and a very poor  
husband—she had not any of these in-  
conveniences.

"'Lizabeth," said Mrs. Wing sol-  
emnly, "the Lord made Carrie just as  
she is, didn't He?"

"Yes," sighed the mother, shaking  
out the little coat.

"And if He'd a wanted her eyes  
straight, He'd 'a made 'em so wouldn't  
He?"

"Yes, mebby—"

"Well, now, don't you go a-flyin' in  
th' face o' Providence like that. Mercy  
on us, they might ruin her eyes with  
their knives 'nd plasters!"

"Yes, I know; but if you'd seen the  
poor child this afternoon; 'mother', said  
she, 'I'd give half o' my life just to be  
like other girls.'"

"Now ain't that awful wicked;  
a'most like takin' her own life—why  
'Lizabeth—"

"How you do put things, Sar' Ann!"  
cried 'Lizabeth, with unusual warmth.

"Why, I remember this mole on my  
neck used to bother the life out o' me.  
I used to think every one that looked at  
me must be a thinkin' how black 'nd  
ugly it was, and don't you mind one of  
your teeth, how it used to bother you!"

"Yes, but you didn't go and dig a  
great hole in your skin to get rid o' th'  
mole, 'nd I didn't—"

"Yes, you did, Sar' Ann; you had  
that big, crooked tooth pulled out, 'nd  
'twas a good sound one, too—don't you  
mind?"

"Well, but that was different,"



snapped Mrs. Wing, and then they both laughed.

Carrie, in spite of trouble, or maybe because of it, was sending out low, trembling notes of song—(she had a really beautiful voice):

"There are angels hovering around, There are angels, angels, angels hovering around."

"I'm real glad, though, Sar' Ann, about your carpet. You've wanted it for a long time, haven't you, sister?"

"Yes, 'nd you'd be surprised how many pieces there are t' remember. Why, I know every rag. There's Carrie's pink dress, 'nd my little Edith's—just think, 'Lizabeth, she'd 'a' been as old as your Carrie by now—most sixteen."

"There are angels hovering around."

"Why, yes, so she would, and they looked alike, too. Do y' mind the little dresses? Carrie's always pink and Edith's always blue. She was so fair, I think. I can see her now—"

"There are angels hovering around," trilled the sweet, low voice of Carrie.

"Oh, sister, if your little Edith had lived, you'd know somehow the way I feel for my poor girl. You don't know how patient and good she is with the children, and baby, too." Great tears were falling now on the little ragged coat, and still the patient fingers sewed on.

"Oh, I know she's a good girl, 'Lizabeth, but 'beauty is only skin deep,' and surely the Lord must know what's best for us."

The mother did not answer, but presently the tears made sewing impossible, and then her visitor rose to go.

"Come, Dan," she said; but 'Lizabeth threw her apron over her head and walked a piece with her.

Carrie was still walking with the baby and unconsciously making things beautiful around her with her song.

"I never knew Carrie was such a good singer," observed Aunt Wing, by way of consolation.

"Yes, 'nd the minister came and asked her into th' choir, but d' y' think she'd go? Why, I can hardly get her to go to church, she's that sensitive."

"Oh, but that's awful wicked, 'Lizabeth."

"I know 'tis, but what can I do? I often think, sister, y' shouldn't mourn so for your dear little Edith. She 'scaped a heap o' heartache."

"It's sheer nonsense. Carrie's a healthy, good looking girl, 'nd she should rise above such feelings."

"I know she should, but—"

"An-gels, an-gels hoverin'—around," came the last faint echo of the song, very, very sweet. The two mothers stood still for a moment in the hazy moonlight to listen. The song died away. 'Lizabeth went back to her heartache and her patching, and Sister Wing went home to a cup of tea and a sound, healthy, toil-earned sleep, as she thought—but what did ail her? The tea was just right, the air was cool and the bed was all that a snowy, well-aired, well-made bed should be; and yet Sister Wing could not sleep.

She had brought home with her two remorseless tyrants—a awakened up conscience and a awakened up memory—and in the hands of these heartless inquisitors poor Mrs. Wing passed the long hours of a tiresome summer night.

"Who was more than a mother to you always?" asked grim Conscience. "'Lizabeth, though she was five years younger," admitted faithful Memory.

"Who forgot her own danger and nursed you and your husband through the smallpox?"

"'Lizabeth."

"And who actually left her own baby and came to you when little Edith died of diphtheria—just think of it—diphtheria?"

Aunt Wing gasped and sat up in bed. "'Lizabeth, 'Lizabeth," she murmured to herself, "'Lizabeth, 'Lizabeth." echoed Conscience and Memory in concert.

"And who cuts up little warm dresses and petticoats given to her—yes, and warm coats and soft, beautiful old things just to make carpet rags?" asked stern Conscience.

"Me; I do, but—"

"And who dislikes children—even 'Lizabeth's children—and talks about pride and 'circumstance,' yes, and the Lord's doings, when her sister needs a warm, helping hand just now?"

"And who thinks she loves her little child when she would not think of helping the one so near to little Edith, even by a word of sympathy?"

Sleep was out of the question, and so the lonely old woman got up and began nervously working at her rags. She prepared them for the early morning stage, wrote out full directions about the warp and the stripe, and then began sewing a few odd pieces to one of the balls.

This done, she mechanically unwound one of the balls for a last fond look at the precious bits. Pink and blue made little bright spots here and there, and whenever she had sewed a blue a pink was almost sure to follow.

"Funny I never noticed it before, but it seems jest natural Edith 'nd Carrie should be together. Oh, if Edith had only lived," she cried, in heartfelt regret.

"Carrie is living," whispered Conscience, and again she seemed to hear the refrain of the sweet old song:

"Angels, angels hovering around."

Yes, the angels—God's shining ones—were holding a crown—a glorious opportunity—just above the earth-bowed head, and although she sewed and sputtered down with the rags and cinders the shining rays fell so thick around her that she must now and then glance wistfully upward. This was the one great chance of a lifetime for Carrie. Could she dare let it pass? If she had the money she would have given it, but the rags—the precious bits—they must go, too.

Then the shining ones drew very, very near. They raised the old gray head and bade her look. If Edith had stayed with her, and instead of the heaven-lit eyes of God's angel there had been the cruel affliction of her cousin's, what then?

Ah, these little children, how they hold us in their tiny power even when all that is left is a little sunken grave and—memories.

The rain came pouring down—a quick dash of a summer shower—and then nature felt relieved. And then the little old woman crept, shivering and weeping, into her bed.

In the early summer morning she carried the precious bundle, directions and all, over to the astonished neighbor.

"Bless m' heart, Mrs. Wing, did y' change yer mind now 'nd bring me yer rags?"

"Yes, I—I needed th' money powerful bad, so I brung 'm—they're quite a weight, too."

A few weeks later Aunt Wing and Dan were enjoying their evening meal when the door opened and there stood 'Lizabeth with the bag of rags.

"Sar' Ann," she said, breathlessly, "I just found out 'bout yer carpet. I couldn't do it, Sar' Ann. I know how much store y' set to them rags, an' Carrie says to me, 'Mother, I'll go 'nd work at th' boarding house 'nd buy back Aunt Wing's casket,'—'nd she's there now."

"Oh, sister, you'll never know just how Carrie feels. She sings all day, 'nd every few minutes she looks in th' glass 'nd tays:

"'Mother, I'm like other girls now. You'd never believe the difference."

"I know," said Aunt Wing, softly, as she tenderly patted the precious balls in her lap. "See, there's little Edith's 'nd Carrie's together. Edith made me do it, sister. Y' needn't thank me," and poor 'Lizabeth wondered vaguely if Sar' Ann wasn't 'sick'nin' for a fever," as she walked quietly home, for once without the children.—Ledger Monthly.

#### Take the Time.

Let us take time for reading. It will never come if we wait to have every piece of work finished and every speck of dirt removed from each article we use. We can always find something else to do, and conscientious housekeepers, with little taste for mental pur-

suits, are apt to make a great blunder. "The life is more than meat, and the body than raiment," which means—if I may be allowed to preach a wee bit of sermon—that you yourself, with all your immortal faculties, are house and furniture and clothing and crockery; and these are utterly worthless if they serve as hindrances instead of helps to your individual human culture.

No kind of labor is degrading if done from a worthy motive, and no motive can be nobler than a womanly desire to make a pleasant home. With this end in view—with love as a prompter, washing and darning and scrubbing are all elevated from drudgery to a nobler sphere. But our homes cannot be properly attractive and profitable to our families if we ourselves are dull and harassed. Our brothers and fathers and husbands and sons need cheerful and intelligent companions at home far more than they need nice dinners and spotless linen. It is necessary that good homemakers and keepers should read and reflect and listen and converse.—Selected.

#### Mistakes of Women.

One of the mistakes of women is in not knowing how to eat. If a man is not to be fed when she is, she thinks a cup of tea and anything handy is good enough. If she needs to save money she does it at the butcher's cost. If she is busy, she will not waste time in eating. If she is unhappy, she goes without food. A man eats if the sheriff is at the door, if his work drives, if the undertaker interrupts; and he is right. A woman will choose ice cream instead of beefsteak and a man will not.

Another of her mistakes is in not knowing how to rest. If she is tired, she may sit down, but she will darn stockings, crochet shawls, embroider doilies. She doesn't know that hard work tires. If she is exhausted, she will write letters, figure her accounts, or read up for some circle or club. She would laugh at you if you hinted that reading or writing could fail to rest her. All over the country women's hospitals flourish because women do not know how to rest.

Another mistake on the list is their constant worrying. Worry and hurry are their enemies, and yet they hug them to their bosoms. Women cross bridges before they come to them, and even build bridges. They imagine misfortune and run out to meet it.

Women are not jolly enough. They make too serious a business of life, and laugh at its little humors too seldom. Men can stop in the midst of perplexities and have a hearty laugh. And it keeps them young. Women cannot, and that is one reason why they fade so early—there are other reasons, but we will pass them now. Worry not only wrinkles the face, but it wrinkles and withers the mind. Have a hearty laugh once in a while; it is a good antiseptic and will purify the mental atmosphere, drive away evil imaginings, bad tempers and other ills.—Buffalo Times.

#### Be Cheerful.

It is care that kills. One who deliberately cultivates a disposition to throw care to the winds soon becomes an indispensable person to his friends. Care is worry, pure and simple. The burden that causes us to worry is heavy enough to bear, in all probability, without adding to it that all-engrossing care which never lets the mind rest for an instant. Suppose you do "have troubles of your own." Can you cure them by worrying? One's best efforts to overcome the trials and tribulations of this life is all that is demanded. If that effort surmounts the difficulties, well and good. If it fails, the fret that wears wrinkles in one's soul, the worry that makes us hated by our friends, the care that wears deep furrows on our brow, do not help one out of the slough of despond, but rather bury us deeper. The world gets very tired of men and women who placard their woes on their faces and moan in their voices in hourly conversation. But the world dearly loves those people who are merry and companionable even when grief is gnawing deep.

## DOMESTIC ECONOMY.

### Preserved Prunes.

TO THE EDITOR:—I send you this day a jar of preserved prunes which I submit to your judgment as to quality. You will observe that the identity of the prune is lost and the fruit assumes the taste and general characteristics of a delicious preserved plum. The lady whose skillful hand preserved the sample presented a few jars to some Eastern friends last season, and they were so pleased with the fruit that they sought in their home markets for more, but found that canned prunes were unknown to the trade. If people in general are as well pleased with prunes preserved in this way, as were those who have tasted them, there is no reason why our canneries should not enter the business largely, making for themselves a handsome profit as well as opening up a new and extensive market for the prune output. The festive prune is a thing of great possibilities.

Sunol.

A. KAMP.

The fruit is very delicious and should become popular. We supposed there always had been a certain amount of French prunes put up in the canneries. If they have overlooked this fruit they should now take notice.

### Domestic Hints.

BROWNED POTATOES.—Pare and cut in two lengthwise, lay in a baking pan containing a little meat fryings. Place in the oven, sprinkle with salt and pepper and bake a nice brown.

RASPBERRY, STRAWBERRY OR CURRANT SYRUP.—Make a syrup of one pound of white sugar and one pint of water. Boil until it spins a thread, skimming before it comes to the boil. Have ready one pint of juice, expressed from the fresh fruit. Add to it the syrup and boil for forty minutes. Bottle and seal while hot.

BAKED PUFFS OF EGGS.—One egg and two thin slices of toast to each person. Seasoning, lemon and parsley. Toast the bread lightly and butter well, place in a flat pan, beat the white of the egg until it stands alone, form in a square on the toast, hollow a little in the center, then carefully drop in the yolk. Sprinkle with salt, pepper and dots of butter, place in a hot oven and brown, garnish well and serve at once.

WARMED OVER TONGUE.—Cut cold tongue into small dice, and if there be any portions near the root that do not seem perfectly tender, remove the fat and stew them in water to cover until tender, then add the better portions and any of the made gravy that may be left. Or, if this be lacking, you may thicken the water in which the tongue has been stewed, and season it highly with lemon juice, Worcestershire sauce, or catsup. Heap mashed and seasoned potato around the edge of a platter, and pour the warmed tongue into the center.

### Hints to Housekeepers.

An English sandwich is made of jam and cottage cheese spread between slices of brown bread. Another is made of the same cheese sprinkled with caraway seed between toasted graham crackers.

It is not generally known that a layer of sliced onions placed on the top of a roast of beef and allowed to cook there will give a delicious flavor to the meat, while their distinctive flavor will not be noticeable.

A young housewife who is famous for the perfection of her iced coffee gives the following rule: Add four tablespoonfuls of granulated sugar and one cup of ground coffee to a quart of boiling milk. Let it stand for half an hour. Turn the mixture into an ice form and leave it packed in ice and salt for half an hour. Then stir it thoroughly, and with it one point of whipped cream. The same woman prepares iced tea in the same manner, substituting one and a half ounces of tea for the coffee.



## S. F. Market Report.

### Produce Market.

SAN FRANCISCO, Oct. 3, 1900.

#### CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Oct.	Nov.
Wednesday.....	78 @76%	78 3/4 @77 1/4
Thursday.....	77 3/4 @77 1/4	78 3/4 @77 1/4
Friday.....	77 3/4 @76 1/4	77 1/2 @77
Saturday.....	75 3/4 @76 1/4	76 1/4 @77 1/4
Monday.....	76 3/4 @77 1/4	77 @78 1/4
Tuesday.....	77 1/4 @76 3/4	77 1/4 @77

#### LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	Sept.	Dec.
Wednesday.....	6s 4 1/4d	—
Thursday.....	6s 4 1/4d	—
Friday.....	6s 3 3/4d	—
Saturday.....	6s 3 3/4d	—
Monday.....	6s 2 3/4d	6s 3 3/4d
Tuesday.....	6s 3 3/4d	6s 4 1/4d

#### SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec., 1900.	May, 1901.
Thursday.....	1 08 1/2 @1 07 1/4	1 15 1/2 @1 14 1/4
Friday.....	1 07 @1 06 1/2	1 13 1/2 @1 13
Saturday.....	1 06 1/2 @1 06 1/2	1 13 1/2 @1 13 1/4
Monday.....	1 06 1/2 @1 06	1 13 @1 12 1/2
Tuesday.....	1 05 1/2 @1 03 1/2	1 11 1/2 @1 10 1/2
Wednesday.....	1 03 1/2 @1 04 1/4	1 10 1/2 @1 11 1/2

#### WHEAT.

The same slow movement previously noted continues to be experienced in the Wheat market, with conditions East and in Europe not presenting for the time being any especially encouraging feature for the producing interest. To make matters worse on this coast, shipowners are in a position to have much their own way in the matter of freight rates, owing to the scarcity of vessels, and are taking full advantage of their opportunities. This state of affairs will not last forever, but it must be admitted that there is no weakness in ocean freight rates now in sight. The deep sea tonnage on the way to this port shows a decrease of fully 30% as compared with a year ago, representing at this date a carrying capacity of little more than 200,000 tons, as against about 320,000 tons at corresponding date last year. Only nine wheat cargoes were cleared from this port in September, the aggregate for the month being 14,600 tons, valued at \$317,160. In September of last year ten cargoes were cleared, the total being 12,000 tons, value \$257,800. The United States visible supply east of the Rockies is given at 55,100,000 bushels, showing an increase for week of only 416,000 bushels.

#### CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, \$1.08 1/2 @1.03 1/4.
May, 1901, delivery, \$1.15 1/2 @1.10 1/4.
Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at \$1.03 1/4 @1.04 1/4; May, 1901, \$1.10 1/4 @1.11 1/4.
California Milling..... \$1 05 @1 08 1/4
Cal. No. 1 shipping, alongside..... 1 02 1/2 @1 03 1/4
Oregon Valley..... 1 02 1/2 @1 05
Washington Blue Stem..... 1 02 1/2 @1 07 1/4
Washington Club..... 1 00 @1 05
Off qualities wheat..... 97 1/2 @1 00

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-1900.	1900-01.
Liv. quotations.....	6s 2 1/2 @6s 2 1/4	6s 6 1/4 @6s 7d
Freight rates.....	36 1/4 @—	42 1/4 @45s
Local market.....	\$1 05 @1 07 1/4	\$1 02 1/2 @1 05

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

#### LOCAL STOCKS OF GRAIN.

Stocks of grain in Call Board warehouses on Oct. 1st and Sept. 1st:

Tons—	Oct. 1st.	Sept. 1st.
Wheat.....	*221,442	177,171
Barley.....	†90,188	82,053
Oats.....	5,700	6,218
Corn.....	8	197

\*Including 137,242 tons at Port Costa, 83,211 tons at Stockton.

†Including 55,698 tons at Port Costa, 22,636 tons at Stockton.

Stocks of wheat in Call Board warehouses on 1st inst. show an increase of 44,271 tons for the month of September. A year ago there were 216,843 tons wheat in Call Board warehouses.

#### FLOUR.

The market is slow and weak, a condition wholly in keeping at present with that of wheat. While quotations for Flour remain unchanged, there is more or less cutting of rates, especially when sales of noteworthy magnitude are effected. Supplies are of fairly liberal volume, and a

considerable proportion of offerings is the product of mills outside the State.

Superfine, lower grades.....	\$2 25 @2 50
Superfine, good to choice.....	2 60 @2 80
Country grades, extras.....	3 15 @3 40
Choice and extra choice.....	3 40 @3 65
Fancy brands, jobbing.....	3 60 @3 75
Oregon, Bakers' extra.....	2 90 @3 25
Washington, Bakers' extra.....	2 90 @3 40

#### BARLEY.

The improved tone developed the preceding week continues to be experienced, but is wholly the result of greatly decreased offerings, the demand being less active than it was earlier in the season. The inquiry on export account is not brisk at present, although shippers would probably be still taking hold freely, were they able to operate to as good advantage as a few weeks ago. Business at present is mostly in feed descriptions, these constituting the bulk of offerings. Speculative values averaged higher than preceding week, but trading in options was not active.

Feed, No. 1 to choice.....	72 1/2 @ 75
Feed, fair to good.....	65 @ 70
Brewing, No. 1 to choice.....	80 @ 85
Chevalier, No. 1 to choice.....	97 1/2 @1 02 1/2
Chevalier, No. 2.....	85 @ 90
Chevalier, poor.....	70 @ 75

#### OATS.

Firmness of the market is fully as pronounced as at any previous date the current season. Especially are the conditions for White and Red oats of choice to select quality favorable to the selling interest, these having been lately in most active request, largely on government account. Recent shipments from Northern points direct to the Orient for army supplies have been of heavy volume.

White Oats, fancy feed.....	1 35 @1 40
White, good to choice.....	1 25 @1 30
White, poor to fair.....	1 15 @1 22 1/2
Gray, common to choice.....	1 15 @1 25
Milling.....	1 30 @1 37 1/2
Surprise, good to choice.....	1 30 @1 45
Black Russian.....	1 10 @1 25
Red.....	1 12 1/2 @1 30

#### CORN.

Stocks of this cereal continue of very light proportions, and that the market will be burdened with offerings of either domestic or imported product in the near future is not probable. Values are being well maintained at the figures quoted.

Large White, good to choice.....	1 22 1/2 @1 25
Large Yellow.....	1 20 @1 22 1/2
Small Yellow.....	1 50 @—
Eastern, in bulk (carload lots).....	1 15 @1 17 1/2

#### RYE.

There is more offering than immediate custom can be found for, except at lower rates than have been yet established this season or than holders are willing to accept.

Good to choice, new.....	87 1/2 @ 90
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#### BUCKWHEAT.

Only one lot of this year's Buckwheat has been thus far received, and that not very choice. Desirable qualities could be placed to good advantage.

Good to choice.....	1 75 @2 10
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#### BEANS.

Receipts and offerings have been nearer wholesale proportions the past week than at any previous date since the opening of the current season. White beans arriving are mostly Lady Washingtons. The limited quantities of Small White and Pea beans coming forward are mostly held at higher rates than dealers are inclined to pay. Lady Washingtons are meeting with fair custom at the prevailing rates. In the line of colored beans, there are moderate offerings of Bayos and Pinks, but few of any other sort. Limas are in light spot supply, most of the movement from southern districts being to Eastern points direct.

Pea, fair to good, 100 lbs.....	3 50 @3 75
Small White, good to choice.....	3 25 @3 50
Lady Washington.....	2 25 @2 50
Pinks.....	2 25 @2 50
Bayos, good to choice.....	1 75 @2 25
Reds.....	3 00 @3 25
Limas, good to choice.....	5 15 @5 25
Black-eye Beans.....	2 50 @2 75
Horse Beans.....	1 75 @2 00
Garbanzos, large.....	2 00 @2 25
Garbanzos, small.....	1 25 @1 75

Advices by recent mail from New York give the following review of the bean market, price quoted being per 60-lb. bushel:

We have had a peculiar market and one which does not often occur at this season of year. Farmers have been very slow to market the new beans, and the old stock has become so nearly exhausted that at times it has been difficult to get enough to supply the most pressing requirements of the trade. Dealers had been anticipating lower prices by this time and in consequence sold out very closely; now they are compelled to get a little stock and find scarcely any available. It is doubtful that much relief will come before October 1, though a considerable quantity is said to

have been sold for prompt shipment. Pea have been especially short, in fact there have been no lots here for several days; last sales at \$2.05, but in the present scarcity they might bring more. Inability to get Pea has turned more trade on Medium and prices for the latter have advanced to \$1.92 1/2 @1.95 firm. Marrow have worked upward steadily to \$2.25 at which there have been sales, and it is doubtful that really choice lots could be bought for less. Exporters have taken some Red Kidney at \$2.00 @2.05, and holders are now asking more. White Kidney firm but quiet. Yellow Eye steady. A few Turtle Soup have sold at \$1.75. Some call for Lima at \$3.55. Nearly 5,000 bags of imported beans were purchased by the Merchants' Association for the Galveston sufferers, and the prices paid ranged from \$1.62 1/2 @1.85; remaining supplies are very light. Green and Scotch peas well sustained.

#### DRIED PEAS.

Market continues to be lightly stocked. There are not many in the interior, and growers in most instances are holding back, not being content with present bids. Green Peas, California..... 2 00 @—  
Niles Peas..... 1 75 @—

#### WOOL.

There is nothing of consequence doing in the local wool market, and reports from Eastern manufacturing centers show much the same inactive condition there as has prevailed for months past. Values are without special change, but for the time being are wholly nominal. Indications are that there will be no revival of business worth mentioning until after the election.

#### SPRING.

Humboldt and Mendocino.....	16 @17
Northern, free.....	14 @15
Northern, defective.....	12 @13
Middle Counties, free.....	14 @15
Middle Counties, defective.....	11 @13
Southern, 12 mos.....	8 @10
Southern, free, 7 mos.....	9 @11
Southern, defective, 7 mos.....	8 @9
Oregon Valley, fine.....	17 @18
Oregon Valley, coarse to medium.....	16 @17
Eastern Oregon, choice.....	13 @16
Eastern Oregon, fair to good.....	10 @12
Nevada, as to condition.....	11 @15

#### FALL.

Middle County.....	9 @10
San Joaquin.....	7 @9
San Joaquin Lambs.....	8 @9

#### HOPS.

While it is difficult to get definite information as to the exact condition of the market, some asserting that the situation is strong, and others claiming that dealers are talking firmness, so as to be able to unload their contract holdings to advantage, it is very evident that growers are not crowding their stock to sale. Any strength which may be developed is fully as, if not more, apt to be exhibited during the next sixty days than later in the season.

Good to choice, 1900 crop.....	11 @14
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The following review of the hop market is published under late date by a New York authority:

Our local market has continued in a very quiet condition. Brewers have shown no haste to buy, exporters have been inclined to hold off for awhile, and dealers are awaiting the outcome of the English crop. Stocks here are light and there has been no disposition to hurry matters. Such transactions as take place are fairly within the range of our quotations. This week will see the end of the harvesting of hops in New York State. So far as present indications go the yield is about the same as last year, possibly a little larger. Prices ruling in the country are 13 @14c for low grades, while fine hops in preferred districts are hard to buy at 15c. Very little in the way of buying has been done so far. Picking in Oregon will also be about through this week, and the estimates of the yield are now 5000 to 10,000 bales below last year. Washington, it is thought, will have about as many as in 1899, but California will have at least 15,000 bales less. For fine Oregon and Yakimas 15c is asked at the producing points, and not much doing as buyers do not want to pay the price. In England picking has been in progress for more than a week, but the harvest will not be completed until the first week in October. Much complaint is heard about the quality, and the quantity is now estimated at a little more than one-half of last year's crop. Of the other European hop countries, which include Austria, Germany and Belgium, all the estimates are somewhat below last year, in Germany 25% less.

#### HAY AND STRAW.

The advanced figures last quoted for hay continue to be maintained, the market presenting in the main a healthy tone, with prospects of still better rather than easier prices as the season advances. Shipments outward have been lately heavy, not only from this port but from Northern points, and mainly on Govern-

ment account. Straw is ruling steady, with offerings moderate.

Wheat.....	9 00 @13 00
Wheat and Oat.....	9 00 @11 50
Oat.....	7 50 @10 50
Barley.....	6 00 @9 00
Volunteer.....	5 00 @7 00
Alfalfa.....	6 00 @7 50
Stock.....	5 00 @7 00
Compressed.....	9 00 @13 00
Straw, 3/4 bale.....	25 @37 1/2

#### MILLSTUFFS.

Mill offal is in light stock and is commanding tolerably stiff figures, especially Bran, which is meeting with most inquiry. Rolled Barley is being more firmly held, owing to the improved condition of the market for whole barley. Milled Corn was offered sparingly and did not incline in favor of buyers.

Bran, 3/4 ton.....	15 50 @16 50
Middlings.....	17 50 @20 00
Shorts, Oregon.....	16 00 @17 00
Barley, Rolled.....	16 00 @16 50
Cornmeal.....	26 00 @—
Cracked Corn.....	27 00 @—

#### SEEDS.

Not much doing in this line and little opportunity for activity, owing to spot stocks being of insignificant proportions. Mustard Seed is in such light supply as to admit of only retail operations. Values throughout remain quotably as previously noted.

	Per cwt.
Mustard, Trieste.....	4 00 @—
Mustard, Yellow.....	5 00 @—
Flax.....	2 00 @2 50
	Per lb.
Canary.....	3 1/4 @ 4
Rape.....	2 @ 3
Hemp.....	3 1/4 @ 4

#### BAGS AND BAGGING.

Inactivity is ruling in this department, as is to be expected at this time of year. In Grain Bags and Wool Sacks there is virtually nothing doing. Fruit Sacks and Bean Bags have been lately in moderate request, with market for former firm, owing to recent advance in cotton.

Calcutta Grain Bags, buyer June-July.....	— @—
Calcutta Grain Bags, spot.....	5 1/2 @—
San Francisco Grain Bags, 22x36, spot.....	5 1/2 @5 1/2
State Prison Bags in lots of 2000, 3/4 100.....	5 05 @—
Wool Sacks, 4 lbs.....	— @32 1/2
Wool Sacks, 3 1/2 lbs.....	— @28 1/2
Fleece Twine.....	7 1/2 @—
Gunnies.....	— @12 1/2
Bean Bags.....	4 1/2 @5 1/4
Fruit Sacks, cotton.....	6 1/4 @7 1/4

#### HIDES, PELTS AND TALLOW.

The Hide and Pelt market is quiet, and the general tone for latter no better than for some time past. Hides are ruling just a trifle steadier. Tallow is in fair export demand at unchanged rates.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	9 @9 1/2	8 @8 1/2
Medium Steers, 48 to 56 lbs.....	8 1/4	7 1/4
Light Steers, under 48 lbs.....	8	7
Heavy Cow Hides, over 50 lbs.....	8	7
Light Cow Hides, under 50 lbs.....	8	7
Wet Salted Kip.....	8	7
Wet Salted Veal.....	8	7
Wet Salted Calf.....	9	8
Dry Hides.....	15	12
Dry Kip and Veal, 11 to 16 lbs.....	15	12
Dry Calf, under 4 lbs.....	15	12
Salted Horse Hides, large.....	2 00 @—	—
Salted Horse Hides, medium.....	1 50 @—	—
Salted Horse Hides, small.....	1 00 @—	—
Dry Horse Hides, large.....	1 50 @—	—
Dry Horse Hides, small.....	75 @1 00	—
Dry Colts' Hides.....	50 @—	—
Pelts, long wool, 3/4 skin.....	75 @1 00	—
Pelts, medium, 3/4 skin.....	50 @70	—
Pelts, short wool, 3/4 skin.....	30 @40	—
Pelts, shearing, 3/4 skin.....	15 @25	—
Deer Skins, heat summer.....	27 1/2 @30	—
Deer Skins, good medium.....	20 @22 1/2	—
Deer Skins, thin winter.....	10 @12	—
Elk Hides.....	4 @—	—
Tallow, good quality.....	3 @3 1/4	—
Tallow, No. 2.....	30 @37 1/2	—
Goat Skins, perfect.....	10 @20	—
Goat Skins, damaged.....	5 @10	—
Kid Skins.....	5 @10	—

#### HONEY.

There is no accumulation of stocks and not likely to be the current season. Considering the light supplies and the comparatively high prices current, the export movement is all that could be reasonably expected.

Extracted, White Liquid.....	7 1/2 @ 8
Extracted, Light Amber.....	6 1/2 @ 7 1/4
Extracted, Amber.....	5 1/2 @ 6 1/4
White Comb, 1 lb frames.....	13 @14
Amber Comb.....	11 1/2 @12 1/2
Dark Comb.....	8 @9

#### BEESEWAX.

Greater quantities than are offering could be readily placed at prevailing figures. Inquiry is mainly for shipment.

Good to choice, light, 3/4 lb.....	23 @26
Dark.....	24 @26

#### LIVE STOCK AND MEATS.

Demand for Beef is showing some im-



provement, and values are a little firmer than last noted. Values for Mutton show steadiness, there being no special surplus of offerings. Tendency on Lamb and Veal has been in favor of buyers. Hogs are in good request at ruling rates, both for immediate use and for packing.

Beef, first quality, dressed, net $\frac{1}{2}$ lb.	6 1/2 @
Beef, second quality	5 1/2 @
Beef, third quality	5 @
Mutton—ewes, 6 1/2 @ 7c; wethers	6 1/2 @ 7 1/2
Hogs, hard grain fed, medium	5 1/2 @ 5 1/2
Hogs, small, fat	5 1/2 @ 5 1/2
Hogs, large, hard	5 1/2 @
Hogs, feeders	5 @ 5 1/2
Hogs, country dressed	6 1/2 @ 7
Veal, small, $\frac{1}{2}$ lb.	6 @ 9
Veal, large, $\frac{1}{2}$ lb.	8 @
Lamb, spring, $\frac{1}{2}$ lb.	8 @

## POULTRY.

There was a good demand most of the week for large and fat fowls on account of the Jewish holidays, but with this exception the market displayed little animation or strength. Other descriptions moved rather slowly, but such as were in good condition brought fully as much as preceding week. Eastern poultry continues to arrive freely, and, averaging larger than domestic, interferes with the sale of the latter. California producers run largely to Leghorns, which are not fine table fowls.

Turkeys, live hens, $\frac{1}{2}$ lb.	11 @ 13
Turkeys, live gobblers, $\frac{1}{2}$ lb.	10 @ 11
Turkeys, Young, per lb.	14 @ 16
Hens, California, $\frac{1}{2}$ dozen	3 50 @ 5 00
Roosters, old	3 50 @ 4 00
Roosters, young (full-grown)	3 50 @ 4 50
Fryers	3 00 @ 3 50
Broilers, large	3 00 @ 3 25
Broilers, small	2 50 @ 3 00
Ducks, old, $\frac{1}{2}$ dozen	3 00 @ 4 00
Ducks, young, $\frac{1}{2}$ dozen	3 50 @ 4 50
Geese, $\frac{1}{2}$ pair	1 25 @ 1 50
Goslings, $\frac{1}{2}$ pair	1 50 @ 1 75
Pigeons, old, $\frac{1}{2}$ dozen	1 25 @
Pigeons, young	1 75 @ 2 00

## BUTTER.

The advanced figures established for fresh have diverted considerable trade to cold storage and packed butter, and in consequence, the market shows less buoyant condition than a week ago, but is not notably lower. Values inclined in favor of buyers, however, especially for other than most select.

Creamery, extras, $\frac{1}{2}$ lb.	28 @ 29
Creamery, firsts	26 @ 27
Creamery, seconds	24 @ 25
Dairy, select	24 @ 26
Dairy, seconds	20 @ 23
Dairy, soft and weedy	— @ —
Mixed store	16 @ 17
Creamery in tubs	20 @ 22
Pickled Roll	20 @ 21
Firkin, California, choice to select	20 @ 21
Firkin, common to fair	17 @ 18

## CHEESE.

Well seasoned domestic is in fair supply, admitting of more orders being filled for this sort than are being received. Mild new of high grade is in light stock and is selling in a small way above quotations. Choice Eastern is high, costing 14@14 1/2 here in carload lots.

California, fancy flat, new	10 @
California, good to choice	9 @ 9 1/2
California, fair to good	8 1/2 @ 9
California Cheddar	— @ —
California, "Young Americas"	9 1/2 @ 11

## EGGS.

No material changes have been developed in the egg market since last review. Retailers are now charging consumers 40c per doz. for fancy fresh, and it will be difficult to get prices much beyond this figure. Most of the trade at present is in Eastern and cold storage eggs, which are in fairly liberal supply and are offering at much the same comparatively low figures as have been current for several weeks past.

California, select, large, white and fresh	34 @
California, select, irregular color & size	26 @ 32
California, good to choice store	20 @ 24
Eastern, as to section and grading	19 @ 24
Eastern, cold storage	— @ —

## VEGETABLES.

Little of special interest to report in this department. The display of vegetables is being narrowed down, few of the summer varieties being now represented in noteworthy quantity. Prices for the kinds offering are without important changes. Onion market was slightly easier, with shipping demand less active.

Beans, String, $\frac{1}{2}$ lb.	2 @ 3
Beans, Wax, $\frac{1}{2}$ lb.	2 @ 3
Beans, Lima, $\frac{1}{2}$ lb.	2 @ 3
Cabbage, choice garden, $\frac{1}{2}$ 100 lbs.	1 00 @ 1 25
Cauliflower, $\frac{1}{2}$ dozen	50 @ 50
Cucumbers, Bay, $\frac{1}{2}$ box	25 @ 50
Egg Plant, $\frac{1}{2}$ box	30 @ 50
Garlic, $\frac{1}{2}$ lb.	3 @ 3 1/2
Onions, Yellow Danver, $\frac{1}{2}$ cental	50 @ 65
Okra, Green, $\frac{1}{2}$ box	25 @ 50
Peas, Sweet, garden, $\frac{1}{2}$ lb.	2 @ 3
Peppers, Green Chile, $\frac{1}{2}$ box	30 @ 50
Peppers, Bell, $\frac{1}{2}$ lb.	35 @ 65
Squash, Summer, $\frac{1}{2}$ large box	30 @ 40
Tomatoes, River, $\frac{1}{2}$ large box	35 @ 60

## POTATOES.

Desirable qualities met with fair inquiry and brought in the main quite steady

rates. Common stock dragged and in some instances failed to command in a regular way the lowest quotations. Sweet potatoes were in good supply and were offered at quite reasonable prices.

Burbanks, River, $\frac{1}{2}$ cental	40 @ 60
Burbanks, Salinas, $\frac{1}{2}$ cental	75 @ 1 05
Sweet Potatoes, Yellow, $\frac{1}{2}$ cental	75 @ 1 25

## The Fruit Market.

## FRESH FRUITS.

The market is well stocked with Apples, but the bulk of offerings is of rather ordinary quality. Choice to select are in fair request and are commanding moderately firm figures, but on the ordinary kinds it is the exception where prices do not have to be shaded in favor of buyers to effect prompt transfers. Late Pears are in moderate stock, but Bartlett's are practically out. Winter Nells will soon be coming into favor, but they are now too green to be sought after for immediate use. Peaches are not making much of a display, neither are they commanding materially higher figures than lately current. In the line of Plums, Coe's Late Red is about the only sort arriving in quotable quantity. Grapes of the late Summer varieties are tolerably well represented and are going at about same rates last quoted. Seedless are scarce and Isabellas are in rather slim receipt. Berries are not arriving in large quantity, but prices fail to materially harden. Melons were in poorer favor, owing to cooler weather, and values declined.

Apples, fancy, 4-tier box	1 00 @ —
Apples, good to choice, $\frac{1}{2}$ 50-lb box	60 @ 90
Apples, common to fair, $\frac{1}{2}$ 50-lb box	25 @ 50
Apples, Crab, $\frac{1}{2}$ box	— @ —
Blackberries, $\frac{1}{2}$ chest	— @ —
Cantaloupes, $\frac{1}{2}$ crate	75 @ 1 25
Figs, $\frac{1}{2}$ 1-layer box	30 @ 50
Figs, $\frac{1}{2}$ 2-layer box	50 @ 75
Grapes, Tokay, $\frac{1}{2}$ box	40 @ 75
Grapes, Seedless Sultana, $\frac{1}{2}$ crate	— @ —
Grapes, Isabella, $\frac{1}{2}$ crate	50 @ 1 00
Grapes, Rose of Peru, $\frac{1}{2}$ box	40 @ 75
Grapes, Black Hamburg, $\frac{1}{2}$ box	40 @ 75
Grapes, Zinfandel, per ton	20 00 @ 25 00
Grapes, Muscat, $\frac{1}{2}$ box	40 @ 65
Raspberries, $\frac{1}{2}$ chest	5 00 @ 7 00
Nectarines, Red, $\frac{1}{2}$ box	— @ —
Nectarines, White, $\frac{1}{2}$ box	— @ —
Nutmeg Melons, $\frac{1}{2}$ crate	40 @ 75
Plums, Coe's Late Red, $\frac{1}{2}$ box	40 @ 65
Plums, fancy, $\frac{1}{2}$ box	— @ —
Prunes, $\frac{1}{2}$ crate	— @ —
Peaches, $\frac{1}{2}$ box	35 @ 60
Peaches, wrapped, $\frac{1}{2}$ box	65 @ 80
Peaches, Cling, $\frac{1}{2}$ ton	— @ —
Peaches, Freestone, $\frac{1}{2}$ ton	— @ —
Pears, Bartlett, $\frac{1}{2}$ box	— @ —
Pears, common kinds, $\frac{1}{2}$ box	30 @ 75
Pomegranates, $\frac{1}{2}$ small box	35 @ 60
Pomegranates, $\frac{1}{2}$ orange box	1 50 @ 2 00
Quinces, $\frac{1}{2}$ box	30 @ 50
Strawberries, Longworth, $\frac{1}{2}$ chest	7 00 @ 8 00
Strawberries, Large, $\frac{1}{2}$ chest	3 50 @ 5 00
Whortleberries, $\frac{1}{2}$ lb.	4 @ 7
Watermelons, $\frac{1}{2}$ 100	8 00 @ 15 00

## DRIED FRUITS.

Jobbers have been doing a fair business in cured and evaporated fruits, mostly in assorted lots and out of stocks in store, but transfers from first hands were not numerous, nor heavy in the aggregate. Where offerings were crowded to sale, lower figures than lately quoted had to be accepted. While the market for most kinds was lower to sell, buyers found asking rates of jobbers much the same as had been prevailing. Apricots proved a notable exception and tended against buyers. Pears inclined to weakness more than any other variety, with tolerably heavy offerings and considerable selling pressure, but it was the exception where the quality of stock submitted for sale could be termed choice to fancy, while the positive inquiry is mostly for latter sort. In Pears perhaps more than in any other fruit do handlers look mainly for high grade, and the difference in price between common and fancy qualities is as a rule decidedly marked. The Peach market was in the main steady, although in the anxiety of some producers to effect sales, cuts were made in prices. Some of good quality went at 4 1/2c, and it had to be exceptionally choice stock which would command 6 1/2c in a wholesale way or for round lots. Values for Plums ruled fairly firm, due more to rather limited offerings than to active inquiry. Figs were held about as last quoted, with a fair movement, especially in best White, mostly on local account. Apples received little attention, the damage to the crop East having failed so far to stiffen local values. Prunes were in less active demand than preceding week, and business was principally in the small sizes. Large Prunes are not offering, however, in sufficient quantity to admit of any very brisk trading.

## COMMON SUN-DRIED.

Apples, sliced	3 @ 3 1/2
Apples, quartered	3 1/2 @ 4 1/2
Figs, Black	2 @ 3
Figs, White	3 @ 3 1/2
Peaches, unpeeled	4 @ 5

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime	6 1/2 @ 7
Apricots, Royal, choice, in sacks, $\frac{1}{2}$ lb.	7 1/2 @ 8

Apricots, Royal, fancy	9 @ —
Apricots, Moorpark	9 1/2 @ 11 1/2
Apples, in 50-lb boxes, rings, pressed, fancy	5 1/2 @ 5 1/2
Apples, 50-lb boxes, rings, pressed, good to choice	4 1/2 @ 4 1/2
Figs, White, fancy pressed	6 @ 7
Nectarines, $\frac{1}{2}$ lb.	4 @ 6
Peaches, unpeeled, fancy	6 @ 6 1/2
Peaches, unpeeled, choice	5 @ 5 1/2
Peaches, peeled, in boxes	11 @ 14
Pears, unpeeled Bartlett's, halved, fancy	6 @ 6 1/2
Pears, halved, unpeeled Bartlett's	5 @ 5 1/2
Pears, quartered, unpeeled Bartlett's	4 1/2 @ 5 1/2
Plums, Black, pitted	4 1/2 @ 5 1/2
Plums, White and Red	5 1/2 @ 6 1/2
Prunes, Silver	4 1/2 @ 6

Prices for new crop Prunes, as named by the California Cured Fruit Association: Santa Clara, four sizes, 3c. per lb.; 40-50s, 7c.; 50-60s, 5 1/2c.; 60-70s, 3 1/2c.; 70-80s, 3 1/2c.; 80-90s, 2 1/2c.; 90-100s, 2 1/2c.; 100-120s, 2c., which is the uniform price for this grade; Sonomas, other than smallest, 1/2c. less; other districts, 1/2c. less, except for smallest; Ruby, 1/2c. premium.

Late mail advices from New York give the following report of the Eastern dried fruit market:

Old evaporated apples are in light remaining stock and with very little demand values are somewhat nominal; small sales of high grade fruit have exceeded figures quoted. Scarcely any sun-dried apples left, and chops and waste also pretty well cleaned up and nominal, available lots generally showing very poor quality. Some new evaporated apples have appeared, both from the South and this State, but quality very ordinary, and 4@4 1/2c all that could be realized. Very little new sun-dried stock here as yet, and values nominal. There is active buying for future delivery at about previous rates; prime evaporated offering for October or November delivery at 4 1/2c, and for later delivery a fraction lower. Northwestern quarters have sold to arrive at 4c for choice, and southern sun-dried, both sliced and quarters, are quoted 3 1/2@3 3/4c to arrive. Chops worth 1 1/2c for October, November or December delivery, and cores and skins 1c for October or November delivery; latter have had considerable inquiry of late. Peaches in moderate supply and held steady. Blackberries have continued plenty and easy, with 5c rather extreme. Raspberries and other small fruits in light supply and held firmly, occasionally above quotations. California apricots have met a fair outlet, and also new peaches, with prices showing little change. Prunes are high on the coast and market higher here for old stock.

Apricots, Cal., Moorpark, 1900	10 @ 14
Apricots, Cal., 1900, $\frac{1}{2}$ lb.	8 @ 9
Peaches, Cal., unpeeled, in bxs, $\frac{1}{2}$ lb.	7 1/2 @ 9 1/2
Peaches, Cal., unpeeled, in bags, $\frac{1}{2}$ lb.	7 @ 9
Prunes, Cal., $\frac{1}{2}$ lb.	4 1/2 @ 7 1/2

## RAISINS.

There is a good demand for new crop Raisins at the rates established by the Growers' Association. Stocks of old had been practically exhausted, and dealers, large and small, are anxious to stock up as promptly as possible for the coming holiday trade. The prices fixed are proving in the main satisfactory, even the comparatively high rates on Sultanas and Thompson Seedless being well sustained, those having to meet with no noteworthy competition this season.

## F. O. B. FRESNO DELIVERY.—CARLOAD LOTS.

Imperial Clusters, 6-crown, $\frac{1}{2}$ 20-lb box	3 00 @
Dchessa Clusters, 5-crown	2 50 @
Fancy Clusters, 4-crown	2 00 @
London Layers, 3-crown, $\frac{1}{2}$ box	1 60 @
do do 2-crown, $\frac{1}{2}$ box	1 50 @
(Usual advance for fractions.)	

Loose Muscatel, 4-crown standard, $\frac{1}{2}$ lb.	— @ 7
Loose Muscatel, 3-crown	— @ 6 1/2
Loose Muscatel, 2-crown standard	— @ 6
Loose Muscatel, seedless	— @ 6 1/2
(Above prices for loose raisins are for 50-lb. boxes.)	

Thompson Seedless.—Bleached fancy,  $\frac{1}{2}$  lb., 12c; choice, 11c; standard, 10c; prime, 9c. Unbleached, 9c.

Sultanas.—Bleached fancy,  $\frac{1}{2}$  lb., 10 1/2c; choice, 9 1/2c; standard, 8 1/2c; prime, 8c. Unbleached, 8c.

## CITRUS FRUITS.

Oranges are offering in moderate quantity, mostly late Valencias, although late or intermediate Navels are also in evidence. Values are steady, but local business in this fruit at present is not very extensive. Lemons are not quotably lower, but are in less active request than lately, owing to cooler weather. Limes were in increased receipt and were offered at reduced figures.

Oranges—Navel, $\frac{1}{2}$ box	2 00 @ 4 50
Valencia, $\frac{1}{2}$ box	2 50 @ 4 00
Seedlings, $\frac{1}{2}$ box	— @ —
Lemons—California, select, $\frac{1}{2}$ box	3 00 @ 3 50
California, good to choice	2 00 @ 2 75
California, common to fair	1 25 @ 1 75
Limes—Mexican, $\frac{1}{2}$ box	4 50 @ 5 00
California, small box	— @ —

## NUTS.

Almond market remains strong, offerings from first hands being light and principally hard shell. The inquiry is mainly for soft shell. Walnuts are beginning to go forward, and most of the crop has been disposed of at Association prices, 10c. for

No. 1 soft, 8c. for No. 2, 9 1/2c. for No. 1 hard, 7 1/2c. for No. 2. Prospects appear good for an early clean-up.

California Almonds, shelled	24 @ 27
California Almonds, paper shell, $\frac{1}{2}$ lb.	13 @ 15
California Almonds, soft shell	10 1/2 @ 12 1/2
California Almonds, hard shell	7 @ 8
Walnuts, White, soft shell	8 1/2 @ 10 1/2
Walnuts, White, California, standard	7 1/2 @ 10
Chestnuts, California Italian	10 @ 12 1/2
Peanuts, California, fair to prime	5 @ 6
Peanuts, Eastern, hand-picked	6 @ 6 1/2
Pine Nuts	5 @ 6

## WINE.

The market is practically the same as at date of last review. Values for new Wine have not yet been determined, but as soon as established they will be announced in this column. Wineries are busy on grapes, prices for which are being well maintained, the quotable range for dry wine stock remaining at \$16@25 per ton, as to quality, quantity and delivery. The large amount of empty cooperage and the decreased grape yield have made conditions quite favorable for the advantageous disposal this season of wine grapes.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, $\frac{1}{4}$ sacks	207,295	1,416,195
Wheat, centals	62,561	1,222,262
Barley, centals	81,393	1,649,673
Oats, centals	16,734	282,280
Corn, centals	1,960	15,620
Rye, centals	65	70,182
Beans, sacks	13,189	45,578
Potatoes, sacks	33,650	377,214
Onions, sacks	11,350	66,513
Hay, tons	3,498	59,082
Wool, bales	550	10,736
Hops, bales	980	2,069

## EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, '00.	Same time last year.
Flour, $\frac{1}{4}$ sacks	48,232	648,070
Wheat, centals	115,541	1,105,807
Barley, centals	54,674	1,016,712
Oats, centals	8,256	31,095
Corn, centals	—	4,035
Beans, sacks	195	5,207
Hay, bales	19,331	39,304
Wool, pounds	233,621	458,361
Hops, pounds	43,613	117,438
Honey, cases	211	1,030
Potatoes, packages	2,283	17,273

## California Dried Fruit at New York.

NEW YORK, Oct. 3.—Evaporated apples, common, 3@4c; prime wire tray, 4 1/2@5 1/2c; choice, 5 1/2@6c; fancy, 6@6 1/2c.

California dried fruits.—A quiet market at generally unchanged values.

Prunes, 3 1/2@7 1/2c.

Apricots, Royal, 11@14c; Moorpark, 15@17c.

Peaches, unpeeled, 6@9c; peeled, 14@18c.

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## CORRESPONDENCE.

### Notes from Sonoma County.

Written for the PACIFIC RURAL PRESS by H. G. PARSONS.

An observant person cannot travel through the principal parts of Sonoma county without being impressed with the fact that, in the variety of its resources, it is an exceptional county even in an exceptional State like California. Other counties are foremost by reason of the marked production of one, two or three specialties. Sonoma rivals most of such counties in general products peculiar to the State, while in her own specialties she stands without a peer. The culture of citrus fruits has commanded such interest in Sonoma county that a citrus fair is held at Cloverdale each year, and by every one the display is said to be wonderful. Santa Clara county has held the palm in respect to prune culture, but good judges pronounce the prunes grown in Russian River valley, Sonoma county, the equal of any. Butte county prides herself on her large and beautiful peaches, but Sonoma has districts in which this fruit reaches equal perfection. Santa Cruz county is supposed to supply the best apples in the State, but the Sonoma apple now has an extensive demand. Santa Barbara and San Diego counties have led the State in olive culture, but olive orchards are now numerous in Sonoma county, and there are several factories for the manufacture of oil. Sacramento and Yuba counties are famous for their hops, but Sonoma has come to be a great hop producer, and she now cuts no inconsiderable figure in the hop market. Mendocino county boasts of her great lumber resources, but the northwestern part of Sonoma county extends into the famous redwood timber belt. Marin county alludes with pride to her flocks, herds and dairies, but Sonoma county is a good second in this respect, and owns thousands of cattle which graze over her verdant hills and meadows. In the culture of that characteristic California fruit which so many of our counties raise to perfection, none can surpass Sonoma in grapes for wine purposes. In berry culture probably no county can outstrip Sacramento for strawberries; but when it comes to blackberries and raspberries, Sonoma takes first rank. In poultry and eggs, Sonoma county produces as much as all the rest of the State combined, her production in this respect being little short of marvelous. This industry is largely centralized at Petaluma. For several miles in any direction from that thriving city there is hardly a farm or resident tract whereon the chicken crop is not a prominent feature. The climate here is peculiarly favorable, being devoid of extremes of heat or cold, which renders fowls exempt from diseases so prevalent in other localities. We are told that Petaluma sends to mar-

ket 11,000 to 12,000 dozen eggs per day, yielding a revenue of nearly \$1,000,000 per year from this source alone. The poultry business has been such a pronounced success here that it is extending to contiguous districts, notably to the Santa Rosa and Sonoma valleys. It is thought \$2,000,000 per year would be a conservative estimate of the present yield from poultry in Sonoma county. The hatching is done mainly by patent incubators, of which three or four styles are manufactured in Petaluma.

**A PROSPEROUS CITY.**—The city of Petaluma, by the way, rated by population, is one of the best business points in California. It enjoys tide water transportation, and is thus enabled to ship its products and to obtain its imports at exceptionally low rates. There is here a good cash market for everything the farmer has to sell, and he obtains all his supplies with a nominal margin added for transportation. Petaluma's merchants draw trade from districts 20 miles distant. We saw merchandise unloaded at Healdsburg which had been shipped by boat from San Francisco to Petaluma, and thence hauled overland by freighters; we saw pine lumber being hauled into Santa Rosa which had also been shipped by boat to Petaluma. These instances illustrate what is done in a commercial way for towns which command both rail and water transportation.

We had an idea that there was much low land in the vicinity of Petaluma; but on three sides the city is surrounded by rolling country, on whose fertile slopes the potato patch or fruit orchard contests for supremacy with the ever-present chicken coop. As a general thing, these coops are small and well scattered. The policy seems to be to breed many small colonies of fowls, instead of one vast centralized colony. It is probable the tendency to disease is thus lessened, and equitable feeding is more readily accomplished.

**RECLAIMED LANDS.**—Near the mouth of Petaluma and Sonoma creeks we noted the enterprise now being carried out of reclaiming vast tracts of marsh or tule land. The reclamation is accomplished by thorough surface drainage through main and lateral canals or ditches. The dredger was excavating a part of the main ditch at the time of our visit. The reclaimed land was last year planted to sugar beets. On account of unfavorable rain conditions, less than half the seeds sown germinated. The experience of two or three years will be needed to demonstrate whether the sugar beet can be grown here with success. Certainly the rich soil is adapted to the production of a profitable crop of some kind.

**A DELIGHTFUL VALLEY.**—The Sonoma valley, enriched on three sides by verdure-clad hills, and with an open front to the south, enabling cool breezes to come in from San Pablo bay—verily, this is an ideal location for country homes. The valley is destined to be largely monopolized for this purpose. Already the Hearst, the Spreckels, the Ashe and other wealthy families have representation here. There are profitable fruit orchards and vineyards in the valley, cultivated by practical growers, but there are more such orchards

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which are cultivated, not primarily for profit, but as incidental to the rural home fad of some of the State's rich citizens. The warm mineral springs which abound, the delightful scenery, and the balmy climate, all combine to make this a favored region for the rural home seeker.

**MULTUM IN PARVO.**—There are said to be 500 acres of bearing blackberry and raspberry vines in Sonoma county, producing 1000 tons, or 100 carloads, of those fruits. These, and strawberries, are raised most largely in the light hill soil near Sebastopol and Green valley, a short distance west of Santa Rosa. Grapes, of course, are raised in all parts of the county. The favored dairy and stock region is in the vicinity of Petaluma. There are nearly 30,000 head of cattle in the county, 10,000 head of horses and 56,000 head of sheep. The latter range over the grazing lands in the north end of the county. The annual shipments of butter from Sonoma county amount to 3,000,000 pounds, valued at \$1,072,000. Large quantities of corn are raised for fodder. Wheat, barley and oats are good crops in favorable localities. The hop sections are Santa Rosa, Sebastopol, Peachland, Forestville, Guerneville, Trenton, Fulton, Windsor, Healdsburg and Alexander valley—all contiguous regions near the center of the county. All through these districts, and ranging north and south thereof, as well as in the Sonoma valley, the deciduous fruits are grown with success. Vegetables, especially potatoes, thrive in many parts of the county. Truly, Sonoma is a favored county and a principality within itself. Little wonder the residents are proud of their heritage.

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Dr. Wiley, chemist of the National Agricultural Department, has made the statement that no food which contains preservatives is fit for use, and that the one in most common use on account of its cheapness is salicylic acid, which is very injurious to weak stomachs. A pamphlet published by the Department of Agriculture at Washington states that the use of salicylic acid as a food preservative has been forbidden by several European governments. In this country it is used to a large extent by American canners and by foreigners who take advantage of us. The department found it in fifteen out of twenty samples of string beans, in ten out of twelve samples of baked beans, and in twenty-four out of forty-one cases of corn.

The chemicals used to preserve articles of food and drink have become a menace to national health. Americans are a nation of dyspeptics, and salicylic acid, the favorite preservative used here, has been pronounced by the Paris Academy of Medicine particularly harmful to all such persons. There is reason to believe that in many delicate people who with proper care and pure nourishment would live comparatively long and comfortable lives, die at an early age or are rendered miserable invalids by this systematic food poisoning, and without any suspicion of the real cause.—Exchange.

### Lincoln and the Sentry.

Foreign visitors are surprised to find that there are no sentries at the White House. During the war a solitary soldier mounted guard, and on one occasion had an amusing colloquy with President Lincoln.

Mr. Lincoln emerged from the front door, his lank figure bent over, as he drew tightly about his shoulders the shawl which he employed for such protection; for he was on his way to the War Department, at the west corner of the grounds, where in times of battle he was wont to get the midnight dispatches from the field. As the blast struck him, he thought of the numbness of the pacing sentry, and, turning to him, said:

"Young man, you've got a cold job to-night. Step inside, and stand guard there."

"My orders keep me out here," the soldier replied.

"Yes," said the President, in his augmentative tone; "but your duty can be performed just as well inside as out here, and you'll oblige me by going in."

"I have been stationed outside," the soldier answered, and resumed his beat.

"Hold on, there!" said Mr. Lincoln, as he turned back again. "It occurs to me that I am commander-in-chief of the army, and I order you to go inside!"

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A FINE SHEEP was drowned on the Schmeiser ranch recently under circumstances that in the case of a human being would have been pronounced suicide. In the barnyard is a large circular watering tank for the stock. It is some three feet deep and partially covered. Going to the barnyard one day, Theo. Schmeiser found a sheep standing in the tank, its front feet on the rim and its body immersed in the water. As the opening in the cover was little larger than the sheep, and it did not have to go there for a drink, he could not understand why it was in there nor why it did not get out if it had fallen in. However he lifted the sheep out of the tank and drove it away. The next day a sheep, dead by drowning, was found in just the same place, and by its markings Theodore knew it was the same one he had pulled out of the water the day before. To all appearances the animal had deliberately gotten into the tank and drowned itself.—Winters Express.

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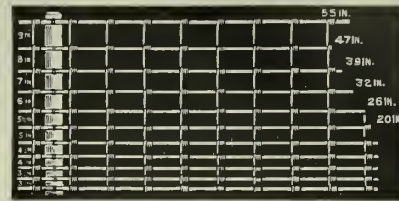
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for house plants, gardens, dampening clothes, apply lice killer, poultry houses, spraying stock with fly removers. It has 1 qt. glass reservoir. Can't corrode. Contents always in view. Throws a fog like mist. Will spray overhead. No Sprayers to equal it. Price, with tin pump, \$1.00; heavy brass pump, \$1.25; made copper, \$1.50.

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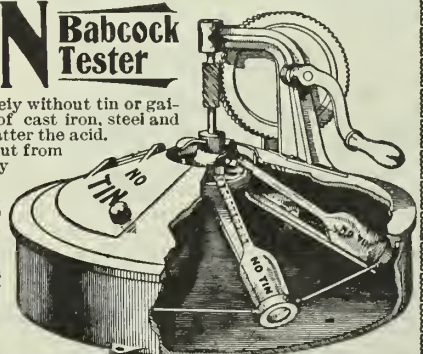
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with a crank on it would be just about as effective as the average milk tester after a few months' use. Why? Because there will be about as many holes in each. Tin is not the correct material of which to make milk testers.

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BRANCHES: St. Paul, Kansas City, Omaha, Ft. Worth, San Francisco.



## Patrons of Husbandry.

### State Grange Meeting at Los Gatos.

The twenty-eighth annual session of the State Grange convened Tuesday. Delegates to the number of 150 were present when the meeting was called to order at 11 o'clock by Worthy Master G. W. Worthen of San Jose. The obligations of the fifth degree were conferred, after which adjournment was taken for luncheon.

At the opening of the afternoon session the reports of the several State officers were heard and referred to committees immediately following the address of Worthy State Master G. W. Worthen. This was a clear and masterly document and stated clearly the issues before the farmers in this State. After reviewing the work of the late convention of the National Grange, he makes the following recommendations for State legislation:

First.—The enactment of a law providing for the inspection and control of trusts.

Second.—The amendment of the pure-food law so as to protect insecticides, fungicides and fertilizers and providing for its enforcement.

Third.—To establish a free public market in San Francisco on a site convenient of access.

Fourth.—To provide for an economical and efficient Department of Agriculture.

Fifth.—In both State and national legislation to secure to the general public the same fair and equal treatment at the railroad ticket and freight offices which they now receive at the postoffices and custom-houses and to which, by law, they are entitled.

Sixth.—The enactment of irrigation laws similar to those now in force in Wyoming and Nebraska.

Speaking of the pure-food law, W. M. Worthen says in his report:

It seems almost impossible to enforce the laws when there are so many individual interests to be subserved, so many local conditions and political influences to interfere. It seems imperative that we send numerous petitions to Congress and demand of our representatives that a national law be enacted and enforced by the Government officials to protect us from the giant evil of adulteration.

On the subject of forestry the Worthy Master says:

From the best authority we learn that forest science constitutes a separate branch of education in various countries of Europe. The first technical instruction was given in the Hartz forest, and Germany has taken the lead in developing a wise forest administration. France, Italy, Sweden and Russia have successfully established forest academies and now the conservation of woodland occupies the legislature of almost all civilized lands. I recommend that the Grange use its best endeavors to have a department of forestry instituted and sustained at the State University at Berkeley.

I recommend that a committee on forestry be appointed by this State Grange to act in harmony with the Sierra Club, Sempervirens Club, California Water and Forest Association and kindred associations, and that every member of the Grange become enlightened and interested to "preserve the forests which preserve the fountains which preserve our lives."

The report of the treasurer showed the Grange to be in a prosperous condition financially.

In the evening the Grange and citizens of Los Gatos gave a reception to the visiting members and delegates.

The programme consisted of music and short addresses. City Attorney Robertson spoke a few words of welcome in behalf of the citizens, and Past Worthy Master J. J. Cornell extended the welcome of the local Grange to the visitors. Worthy Master G. W. Worthen responded to the addresses, speaking of the advantages of American citizenship and briefly outlining the objects of the Grange. Miss Erma Brown rendered a dialect song and the address of the evening was then delivered by J. S. Taylor, Worthy Lecturer of the State Grange, in which he expatiated on the advantages and objects of the order.

Senator Johnston, Professor Chase, C. W. Emmory, Worthy Overseer of the State Grange, and Daniel Flint of Sacramento were called upon and re-

sponded with short speeches. The programme was closed by O. B. Whaley in a humorous recitation on woman's rights, after which all repaired to the adjoining banquet room, where a dainty repast had been provided.

On Wednesday the Grange settled down to the regular work of the session.

### Answers by Dr. Creely.

#### TO CORRECT SCOURING.

TO THE EDITOR:—Will Dr. Creely give me a prescription for my horse which is troubled with "scouring" after trotting a few miles? He is all right when in the stable or doing farm work. I feed him on Chevalier barley hay and rolled barley. Have tried him without the latter, but see no difference. His age is 14 years. Had his teeth attended to nine months ago.—SUBSCRIBER, Santa Clara county, Cal.

Take: Iron citrate, 3 oz.; tannic acid, 2 drachms; gentian, 1 oz.; nux vomica, ½ oz. Mix and make twelve powders; give one each morning.

#### FOR OVEREATING.

TO THE EDITOR:—What shall be done for a horse which has gotten to a wheat bin and overeaten?—ENQUIRER, Saratoga.

Give a good purgative as soon as possible: Raw linseed oil, 1 pint; Barbadoes aloes, 6 drachms; calomel, ½ drachm; oil peppermint, ½ drachm.

Give internally a heaping tablespoon of the following two times daily: Granulated sal nitre, 6 ounces; bicarbonate soda, 4 ounces; pulverized gentian root, 2 ounces.

#### MARE WITH THE SKIN DISEASE.

TO THE EDITOR:—I have a valuable mare affected with some skin disease. She is constantly biting her sides and legs, especially when warm, but does not scratch herself otherwise. This condition has been noticed at times for years and tends to make her unduly nervous and excitable. Small black pimples are found on her skin. Bowels are often too loose when traveling, her appetite is ravenous, but she is getting thin. GEO. O. HILTON, San Diego.

Feed moist feed; give internally once daily four grains of arsenic. Apply to affected parts the following: Lysol, 4 oz.; olive oil, 12 oz.; oil spike, ½ oz.; mix.

#### PIGS WHICH HAVE TOO MUCH PROSPERITY.

TO THE EDITOR:—Can you tell me what ails and a remedy and preventive for little fat pigs two weeks old, that fall over, quiver and get rigid. If you raise them up they lean to one side and run fast as they can until clear over, when they lay there and quiver and try to move along on their sides. They fall on the same side each time. They are fat and full of life, but stiff and rigid so they can't walk. I have had parts of three or four litters afflicted that way the past summer. It seems to be in small litters where a sow has but few pigs which are doing fine. I am not sure that any of them die unless they get left out or get laid on. One man said the dust affects the head. If it is blind staggers, what is a remedy? H. E. DYE, Visalia.

Give an occasional dose of castor oil.

E. J. CREELY, D. V. S.  
510 Golden Gate Avenue, S. F.

### THE GREATEST CATTLE SALE.

Six Hundred Head on Exhibition Next Week.  
400 Will Be Sold at Public Auction.

Next week and the week following the cattle-breeding public of this country will be afforded the opportunity of inspecting 600 head of registered Shorthorn and Hereford cattle at Kansas City, in the stockyards' new sale pavilion, when 400 head (150 Shorthorns and 250 Herefords) will be sold to the highest bidder. Prices and individual quality will doubtless be within the reach of all prospective buyers, as the promoters, under the auspices of the two American associations, bring the cattle together and invite a friendly inspection strictly upon their merits. Coming, as the offerings do, from about 150 different breeders, which includes the foremost and most noted of both breeds, the cattle will represent the best in this country or England. Consult the announcement elsewhere in this issue and govern yourselves accordingly.

W. P. BRUSH.

### Alcohol Plow Locomobiles in Germany.

Consul General Guenther sends the following from Frankfort, July 27, 1900: On July 25 the motor factory of Oberursel, near Frankfort, exhibited in the presence of a number of experts its new alcohol plow locomobiles. The plow locomobile is a 20 H. P. one, and confidence is expressed by competent judges that coal can in some cases be substituted by alcohol, which can be procured everywhere and at a low cost. The alcohol plow is said to have performed its work fully as well as a steam plow operated simultaneously. The problem of using alcohol for power purposes has been solved by the motor factory in evaporating denaturalized alcohol of 90°. The construction and operation of the motor is, after this gasification, the same as that of a gas motor. The machine uses about a pint of alcohol an hour for 1 H. P. It is claimed that the operating expense is 25% lower than that of steam plows.

It is certainly better to have the alcohol in the plow than in the plowman.

### Paris Exposition Awards.

Among the recipients of silver medals for horticultural photographs at the Paris Exposition are the following: California Nursery Co., Niles.; California Exposition Commissioners—Ellwood Cooper, Santa Barbara; George C. Roeding, Fresno. Recipients of bronze medals for the same line of exhibits are: A. S. Packard, San Jose; Harry Postlethwaite, San Jose. Mrs. Kinton Stevens, Santa Barbara, receives honorable mention in the same connection. The California Commission secures a gold medal for fruit trees and fruit, and Trumbull & Beebe of San Francisco a silver medal for horticultural seeds. Second prizes for exhibits of oranges have been awarded as follows: Arlington Heights Fruit Co., Riverside Orange Co. and C. E. Maude, Riverside, Cal.; Phil M. Baier and George Frost, Porterville, Cal.; Harry E. Fuller, Redlands, Cal.

THE LIVERMORE VALLEY VINTAGE.—Livermore Herald, Sept. 29: The vineyards throughout the valley are busy places just now. They are decidedly spotted as regards yield, some producing

handsomely while others are almost bare of fruit. This condition of affairs has produced a wide range of prices for picking, varying from \$1.25 to \$2 a ton. While some pickers have made as high as \$2.50 a day at the former price, others have scarcely made their board at the highest price paid per ton, due of course to the condition of the crop. Prior to the north gale of last week, the grapes were all in fine condition; but they have not been so good since, although still better than the usual average. All the wineries are still busy with a prospect of running for several weeks yet, with the exception of Ruby Hill. Mr. Crellin has had an exceptionally good vintage, although not up to the average in quantity, and he will finish his season's labors on next Monday.

WINE MAKING NEAR ST. HELENA.—St. Helena Star: Wine making is now fairly under way, and while the scenes of activity about the cellars are not as marked as ten or fifteen years ago, there will still be considerable wine made. At Beringer Bros' most of the grapes purchased come from the vicinity of Calistoga, and they are not running to their full capacity by any means. During the middle of the morning and afternoon the wagons come along pretty lively, the Calistoga people making two trips daily. The grapes are of good quality, the sugar going from 25% as high as 28% and 30%. At Greystone about fifty tons of grapes are being crushed every day now, two crushers being in operation most of the time. The grapes for this cellar come mostly from the vicinity of Calistoga and also from Howell mountain. During the season about 1500 tons of grapes will be made into wine. At James Moffitt's place Bismarck Bruck is making fine progress with the work. Only the grapes of the home place are being made up and the yield will be in the neighborhood of 20,000 gallons. It seems strange to see so little wine made at this immense cellar, where in years gone by there was an output of several hundred thousand gallons.

THE Rippley Hardware Co. of Grafton, Ill., manufacturers of the Reliable feed cooker, advertise the Continuous Mist and Compressed Air sprayers. The first named is a hand machine, and differs from the others chiefly in its glass reservoir, so that powerful solutions do not rust or corrode it. The reservoir has extra capacity, an advantage when one is working in the field or orchard and at some distance from the supply tank. The Compressed Air machine is designed as a practical adaptation at a low price of the spraying principle. The air chamber and compressor give a continuous stream 30 feet high, or as fine a mist as desired. It is especially convenient for white-washing buildings and fences. These people make a full line of stock supplies, such as rice and mite killers, etc. Write them for special circulars.

Elgin Watches sold by jewelers everywhere in various sizes and styles. Prices to suit. Send for free booklet. Elgin National Watch Co., Elgin, Ill.

### GRAPES PRUNES WHEAT PEACHES

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Are now offered for sale in lots of from 5 TO 40 ACRES. This is the most fertile body of land ever placed on the market, and is located in the FINEST FRUIT SECTION IN THE STATE. It is a living testimonial of the varied fruit and cereal productions that can be grown in the State.

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## List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
PIONEER PATENT SOLICITORS  
FOR PACIFIC COAST.

FOR WEEK ENDING SEPTEMBER 18, 1900.

- 658,313.—PIPE CAP AND PLUG—J. A. Bernardi, Salem, Or.  
658,204.—VOTING MACHINE—C. Christensen, Oakland, Cal.  
658,139.—FLUSHER—I. P. Clarke, Alameda, Cal.  
658,236.—VOTE REGISTER—H. A. Clifford, S. F.  
658,142.—CAR—G. A. & R. F. Dunn, Dinuba, Cal.  
658,212.—SAW—J. M. Garrison, Santa Barbara, Cal.  
657,933.—CRUSHER—T. R. Goth, S. F.  
657,934.—GAS ENGINE—G. E. Hoyt, S. F.  
658,266.—BALANCE SHEET—L. H. Johnson, Portland, Or.  
658,016.—SEWING MACHINE—F. T. Leilich, S. F.  
658,111.—SHOULDER BRACE—Louise S. Long, S. F.  
658,271.—WOOD FILLER—E. A. Meyer, Fruitvale, Cal.  
658,274.—SAW GAGE—J. Morin, Seattle, Wash.  
658,219.—CABLE GRIP—G. C. Niles, Bay-side, Cal.  
658,118.—FLAT WIRE CABLE—E. I. Parsons, S. F.  
658,119.—BICYCLE BRAKE—W. H. Parsons, Calistoga, Cal.  
658,120.—CONCENTRATOR—J. W. Pinder, Groveland, Cal.  
658,124.—SNAP HOOK—W. W. Semple, Pendleton, Cal.  
658,130.—SAW HANDLE—G. R. L. Stimers, Loyalton, Cal.  
658,298.—FENCE POST—Nancy A. Taylor, McCoy, Cal.  
658,306.—HARROW—J. D. Whitten, Kingsley, Or.  
33,235.—DESIGN—W. Duguid, Seattle, Wash.  
33,206.—DESIGN—G. Stocker, Pasadena, Cal.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey, Strong & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

**BALING PRESS.**—No. 657,287. Sept. 4, 1900. C. J. Johnson, Paso Robles, Cal. This invention relates to that class of baling presses known as "horizontal continuous presses." The object is to provide a means by which the opening and closing of the doors, and the various operations of the machine are performed mechanically, and hand labor is reduced. It consists of a frame having the press-box mounted at one end, a revolvable cam-carrying disk at the opposite end, a follower and a rebounding plunger beam having a slotted extension from one end adapted to guide said beam in its movements, said beam actuated by the cams so that the follower is reciprocated within the box. There is an extension through which the compressed material is forced to form the bale, this extension having a movable top plate and screws by which the outer end of the plate is adjusted to regulate the size of the discharge opening and determine the amount of compression of the baled material. The material is charged into the press through a top and a side door so hinged as to open outwardly from each other and by means of oscillating shafts, rocker arms and a rotatable disk, with means engaging these arms, the doors are automatically opened and closed, being retained in their closed position by spring-pressed latch bolts.

**LUBRICATOR.**—No. 657,219. Sept. 4, 1900. Byron Jackson, San Francisco, Cal. This invention relates to an apparatus by which bearings of any description are constantly and automatically lubricated. A flange or collar is secured to a revolvable shaft and formed with a cup having a rounded interior and one end opened, a second cup surrounding the shaft has a bearing formed rigid therewith and entering the opening end of the first named cup, but without contacting therewith. This bearing has a passage through it, and an annular loose cover for the second cup through which the shaft passes. A bent tube has its open end lying close to the inner wall of the first-named cup so that the revolution causes the oil to be taken up by this tube, carried from one cup into the other, whence it is allowed to pass into the bearing around the shaft.

**AUTOMATIC ADJUSTMENT FOR HARVESTER REELS.**—No. 657,229. Sept. 4, 1900. S. M. Warder, Winters, Cal. This invention relates to a means for adjusting

the reels of harvesters, headers and the like apparatus so that the reel will always be in the proper position to sweep the grain toward the sickle whether the straw be short or long. It consists of means carried by the header portion of the harvesting apparatus by which the sickle bar is raised or depressed, a reel adapted to sweep the grain toward the sickle bar, reel timbers to the front ends of which the reel shaft is journaled, links supporting said reel timbers at the rear and at points intermediate between the reel and front end of the bars in such a manner that the bars carrying the reel frame are tilted about their pivot points so as to move the reel frame upward and forward, or downward and backward in unison with the movements of the header frame.

**RAISIN CLEANER AND CAP STEMMER.**—No. 657,692. Sept. 11, 1900. Harry Eastwood, Fresno, Cal. This invention relates to an apparatus designed for cleaning raisins and for performing work known as "cap-stemming." It comprises revolvable drums having partially inclosing segmental fenders, flexible spring-pressed aprons capable of elastic yield at any point and between which and the drums fruit is caused to pass, means for delivering the fruit into said space near the upper part of the drum, a tailboard or screen over which the fruit is passed from the drums, and an air-forcing blast mechanism by which the refuse is separated from the fruit.

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Many people want a small incubator but don't want a mere toy, a plaything that will only spoil good eggs. To meet the demand for a really good little incubator we have perfected the now famous **RELIABLE 50 EGG BANTLING SPECIAL.** It is the equal of any hatcher ever made, only smaller, and sells for only \$5. Send 10c for our 20th Century Catalogue and Poultry Book. Best ever published.

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THE BEST FEED FOR STOCK,  
CHICKENS AND PIGS.

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**HOLSTEINS**—Winners over Jerseys of EVERY butter contest at State Fairs for last six years. Aged, 4-yr., 3-yr. and 2-yr.-old classes, except 1st on 2-yr.-old in 1895. Last year every butter prize awarded won by my herd, except 2nd for 2-yr.-olds, 21 Jerseys and Durhams competing. F. H. Burke, 626 Market St., S. F.

**BULLS**—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times, either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

**PETER Saxe & Son**, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs. Correspondence solicited.

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**C. P. BAILEY**, San Joss, Cal. Angora Goats and Persian Fat-tailed Sheep. Catalogue free.

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**HENTTEETH**, Blood Meal, Bone, Chick Feed; circular free, or 4 samples, prices, etc., mailed for 5c postage. Poultry, Pigeon and Belgian Hare Supplies, Incubators, etc. Croley, 506 Sac'to St., S. F.

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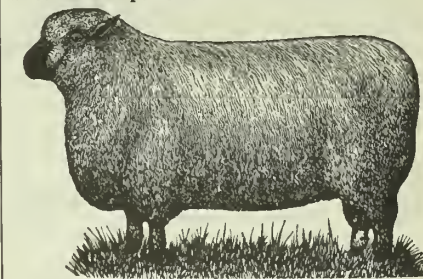
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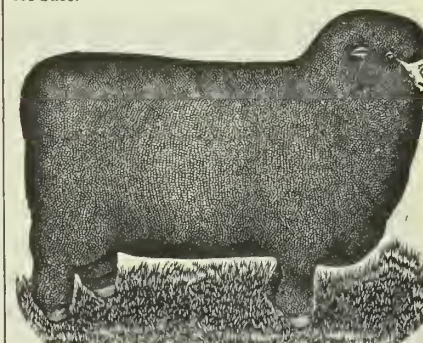
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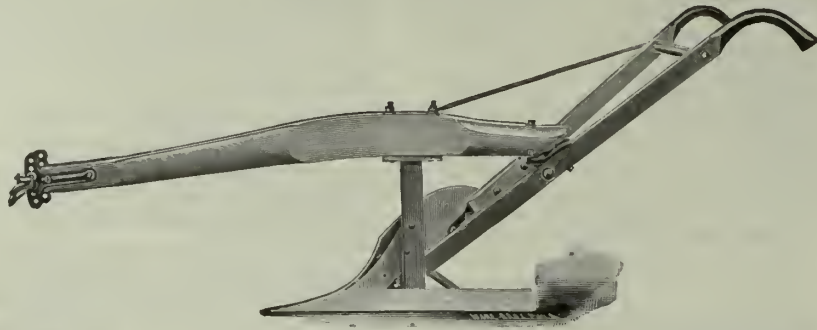
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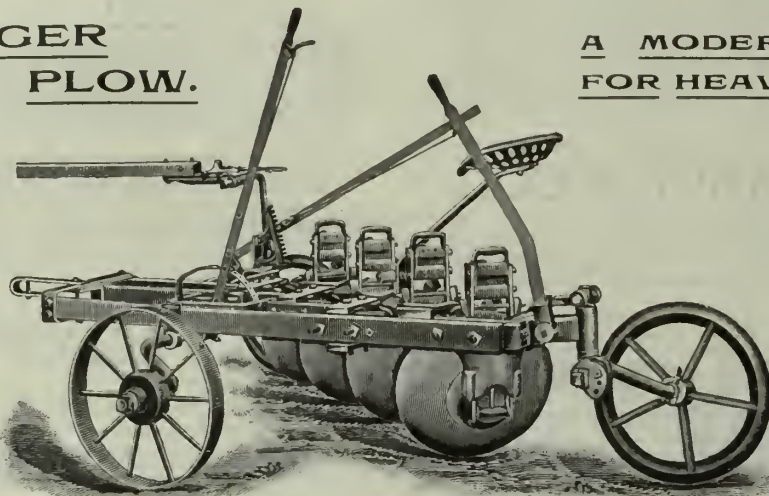
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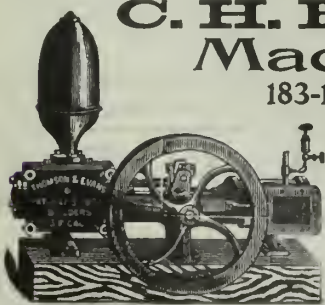


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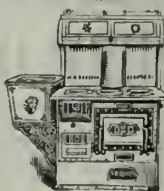
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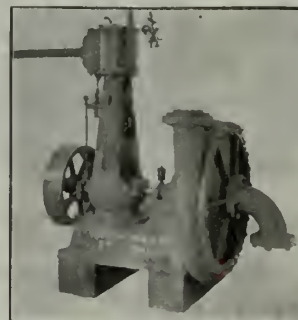
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## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 15.

SAN FRANCISCO, SATURDAY, OCTOBER 13, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

### Flowing Water.

The engravings upon this page are delightful to look upon. Flowing water has delight and cheer which have awakened appreciation and thankfulness in all people in all times. Poetry and art have vied with each other to present in tangible form this universal sentiment of mankind.

It is but natural that in a semi-arid land there should be keener appreciation than elsewhere of the blessings embodied in the flowing water, because direct use is made of it and it is more clearly related to human comfort and prosperity. In the humid regions, streams are for the most part wastes and surpluses seeking refuge in the sea; in the arid region we are prone to cry with McKay:

Water is the mother of the vine,  
The nurse and fountain of fecundity,  
The adorning and refresher of the world.

We more highly appreciate the stream because we have so many more ways to measure its beneficence, and not less is our pride in it because we have learned how to co-operate with nature in its production. The development of water is a term of little significance in the humid regions; it is a synonym of wealth, comfort and prosperity in a thirsty land. The blessings which the poet invoked upon the man who doubled the grass blades can be rightly claimed by the man who doubles



Chico Creek Canyon.

the stream flow, because his work is antecedent and fundamental. California is full of men and women who are doing this work continually, and their deeds have excited such wide interest and approval that there is now a wider sentiment than ever for the enlistment of the highest powers of State and nation to advance the work beyond the limits of individual and corporate effort. Water conservation on a large scale, water legislation on a basis of public justice and interest, water use on the basis of the truest economy and widest efficiency—all these are gaining ascendancy as among the greatest economic questions of the day.

Our engravings are suggestive of phases of our theme. First is Chico creek. It is a perennial stream of clear mountain water, having its source far up in the Sierras and flowing over

a pebbly bottom from the canyon scene of the engraving until it reaches the shade of the giant oaks, sycamores and alders, which mark its course throughout the entire length of Rancho Chico—the princely estate of the late General Bidwell. The close of his honorable career will bring the property into the hands of hundreds of appreciative owners who will never tire of the story of his life, and who will esteem their possessions the more highly because of his relations to them.

The lower engravings are illustrative of water development near the bay of San Francisco and are the work of the Spring Valley Water Co. in the southern part of Alameda county. Not content with the visible flow of the creek, its underflow was sought and the result has been the discovery of a large subterranean lake, fed by hundreds of square miles of watershed, which has been successfully tapped at Sunol, and in the pictures a large flow of delightfully pure water is seen to issue from its deep gravel formation for the comfort of the inhabitants and the promotion of the industries of the Pacific coast metropolis. Similar work has been done in many places in southern California. In the central and northern parts of the State there are thousands of opportunities which the future will utilize to their fullest extent, for it is clear that, even with considerable rainfall, irrigation is valuable.



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E. J. WICKSON.....Horticultural Editor.

San Francisco, October 13, 1900.

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## The Week.

Showers have fallen rather freely, and at some points the season's rainfall is above the normal at this date. These early rains, followed by high heat and northerly winds, do not count for much agriculturally. In some places new grass is starting, but it will take a deeper wetting than has yet been had to hold it to effective growth. On the whole, perhaps, the case with which rain has fallen may be taken as assurance that the coming year has been set for heavy rain figures, and that is good enough to compensate for what exposed products and dry feed may have been hurt by the early wetting.

Spot wheat has held its own, but it could hardly be pressed at present without giving way a little. Futures have declined 2 cents. There is, however, some outward movement, as two cargoes of 4000 tons each have cleared. Barley is rather weak, though spot is unchanged; 3600 tons of Chevalier have gone for Belgium. Oats are firm, especially for the best grades; the demand is good, both for speculation and Government use. Stable hay is unchanged, but alfalfa is higher, as also is straw. Bran is easier, but not lower; stocks are larger. Beef is easier and said to be in lighter demand; mutton and hogs are unchanged, the latter in good demand at full rates. Butter is not lower, but the feeling is said to be easier; cheese is steady and fancy eggs higher. Poultry is held down by heavy arrivals from the East. Young turkeys are selling well. Grapes are firmer, especially such as the wineries need. Winter Nelis pears are coming in, but are rather hard so far. Six thousand boxes of apples have gone out for Australia. Citrus fruits are quiet; lemons being weak through cheapness of limes. Dried fruit is quiet. Prunes are selling fairly at established prices, while raisins are firm and in good demand. Sultanas and Seedless are in light supply and are selling above fixed prices and are hard to get. Walnuts are firm and the outlook is good, as foreign nuts are advanced. Almonds are strong and scarce. Beans drag slowly, but are not changed. Onions are holding well. Potatoes have dropped at the last moment, but are said to be selling better on the river than at this point. Hop sellers and buyers are far apart and do little. Wool is dormant.

GEO. C. ROEDING of Fresno is doing a very enterprising and creditable thing by sending out his pack of genuine, blastophagated Smyrna figs with a neat circular, explaining how California has come at length to produce the true fig of commerce. The information secured will be looked upon by many as worth as much as the figs, for the story is interesting as a

fairly tale to those who do not know about figs or the efforts which Californians have put forth for the last twenty years to reach the position which Mr. Roeding now occupies. The figs themselves are as fine as we ever saw, and demonstrate that California can now proceed on the Smyrna basis to do more with dried figs than it has ever been safe to undertake before.

## Agricultural Conference at Stockton.

We were privileged last week to participate with President Benjamin Ide Wheeler and Dairy Instructor Leroy Anderson of the State University in a conference with the citizens of Stockton, concerning means and policies which would advance the agricultural interests of the Stockton region of reclaimed lands. The idea of inviting the University people to a conference with the capitalists and land owners, concerning lines of agricultural expansion and improvement, originated with Regent John E. Budd, who resides in Stockton and desired to show his fellow citizens that the University is ready to enter upon the consideration of matters of the most practical importance, and desires to demonstrate its usefulness by its ability to furnish trustworthy information on industrial subjects. Mr. Budd's proposition was acceptable; and the conference was duly arranged for Saturday, October 8, and was held with the social eclat and hospitality characteristic of the Stocktonians. There was an informal reception in the rooms of the Yosemite club, on the preceding evening, at which the leading topics were cows and clover, and on Saturday morning, as about 200 citizens assembled to take the excursion steamer for the scene of the chief events of the day, the talk was all of progressive farming which promised success under the conditions locally prevailing.

The event planned by Regent Budd disclosed one feature which we have anticipated as likely to be significant in the development of California, and that is that treasure secured by mining in the frigid regions of Alaska would naturally flow toward the upbuilding of homes and the pursuit of profitable investments in California. This fact was shown at Stockton, for one of the leading parties at the conference, and a most generous host as well, was Mr. Clarence Berry, whose Klondike successes are generally known. Mr. Berry recently purchased a fine large tract of reclaimed land on Roberts island, and will equip a large dairy enterprise at Wakefield, involving both fine herds of dairy cattle and a creamery plant of the most approved sort. Mr. Berry and his family are old Californians, and he will take pride in doing something admirable for his own State with the ample means which he acquired in distant fields. During the day at his place he dispensed most generous hospitality, and by his cordiality and modest demeanor won the good opinion of all his guests.

On the trip down the river from Stockton to Wakefield a stop was made on Rough and Ready island, so that all might see the dairy buildings, site and pasture fields of J. M. Biggar, who also conducts a large milk and creamery business in the city of Stockton. Mr. Biggar is a dairyman of the highest class, and in all his operations follows the most advanced methods and uses the most modern appliances. His success is now not only of advantage to himself, but his example is proving of great service to other owners of reclaimed lands, because his work is a practical demonstration of the adaptability of progressive dairy policy to the rich lands which are available in such vast area in the Stockton region.

One of the most gratifying features of the day's experience was the opportunity afforded to President Benjamin Ide Wheeler of the University of California to demonstrate his interest and disposition toward active participation in the development of the industrial interests of the State. Not only were his manner and conversation strikingly grateful to the scores who continually surrounded him, but his address at Wakefield showed so strikingly his standing as an up-to-date man of affairs and believer in California's future, that the most demonstrative favors were shown him by the delighted audience. His leading address was a stirring declaration of the purposes of the University to render the most direct and practical service in the advancement of the industrial interests of the State. He fitly characterized the superior advantages of California for com-

mercial success as compared with the older regions of the country. He declared that he was pleased to stand before his hearers as a representative of an institution of which all Californians have reason to be proud—one of California's creations on which the world looks with great interest. The valleys of California will support the densest and richest population of the world, and the people here should enter upon their opportunity. California has been lavish; but order, system and economy have got to come, and the University will lead the people on. President Wheeler spoke of the advancement of mining education at the University under the generous provisions of Mrs. Hearst, and of the promotion of commercial education by its college of commerce and by the establishment of a commercial museum in San Francisco, both of which would act directly in the upbuilding of a vast export trade from California ports. He spoke enthusiastically, also, of the agricultural department of the University and of its ambition to serve the people by advancing their prosperity through an enlightened agriculture. He cited forest preservation and the improvement of irrigation laws through the enactment of statutes in harmony with the spirit and suiting the conditions of development in an irrigated country. In closing, President Wheeler congratulated the people on the possession of the richest and best State and urged everybody to enter into the great opportunities given them. The University will lead where the people are ready to go.

After President Wheeler had so deeply struck the keynote of the occasion in his forcible showing of the relation of the University to the various interests of the State, there was such demonstration of the value and applicability of the University's work for the exposition of local agricultural problems as the brief time afforded. The new dairy instructor, Mr. Leroy Anderson, made an excellent impression, not alone by his earnestness and candor, but by the intimate knowledge of his subject which his speaking disclosed. His talk on the dairy cow as the foundation of success in the line which his audience were especially considering was very acceptable to his hearers, and many acknowledged receipt of information of which they were especially in need.

During the afternoon an earnest plea was made for the extension of the animal industry on the rich moist lands which afford such exceptional advantages in the growth of forage. Many mistakes had been made in localizing effort in California, as in one case a colony of Hollanders who would have made a grand success on the rich dyked lands like those which they had known for centuries, had been taken to dry uplands at a distance and induced to plant olives of which they knew nothing whatever. Californians have done too much in proving the unsuitability of certain lands and certain uncommon products; they have done too little in the development of rich low lands in a variety of common things of which the State stands in need and is importing from other producing regions. Not only will the dairy stand moderate expansion if nothing but the best product is secured, but pork products, beef, mutton and lamb products of high grade are now possible, not on the range, but on the farm plan, and offer a chance for the profitable use of low moist lands if producers will study closely the higher arts and the economies of production. Points were also made by the University speakers upon the relation of these animal industries to maintenance of fertility. The dissatisfaction with grain crops can be overcome by the securing of greater yields per acre. Stockton inventors and manufacturers have so cheapened culture and harvesting that nothing more is necessary in that line; the price of grain is a world affair which cannot be locally changed, but the bringing back of the acre product to something like old figures lies in restoration of the soil, and the possibility of doing that lies in the promotion of the animal industries and the pursuit of such rotation as suits the local conditions. The pertinence of this doctrine seemed to commend itself to the assembly.

Relating to this rational undertaking was the improvement of the forage products of the reclaimed lands. Ample evidence is available that splendid meadows and pastures of rye grass and red and white clover can be secured, and that these plants will stand seepage and overflow which would ruin alfalfa. There is, therefore, the chance of employing



alfalfa so far as it finds suitable conditions, and other plants where it shows weakness. Supplementary to all of these and to the native plants which may do well for winter pasturage, comes the growth of almost limitless amount of corn for the silo, and an assurance of an abundance of succulent forage the year round at a minimum cost.

The disposition of the Stockton people toward participation in the advancement of the agricultural interests of their district is very commendable for enterprise and very promising. It should serve as an inspiration and example for the other thriving cities of the State. The city should meet the country half way, instead of intrenching itself beside its smooth pavements and leaving the farmer to do the best he can in the dust and mud outside. Cordial sympathy, the recognition of mutual obligations, the wise use of financial assistance in progressive efforts and the liberal support of institutions which exist for the demonstration of agricultural truth and the widest possible dissemination of it—these are all ways in which the prosperous city can advance the surrounding country and in rural prosperity and confidence find its own interests materially advanced.

## QUERIES AND REPLIES.

### Palms, Vines and Shade Trees.

TO THE EDITOR:—When is the most favorable time to plant palms? I have been told October was a good time; but I want to be sure. When is the most favorable time to root grape cuttings? What varieties of fruit trees would be nice to plant near the house for shade? What ornamental trees grow tall and branch out for shade? I do not care for eucalyptus trees; have not lived in the State very long, so am not familiar with the trees of California.—NEWCOMER, Corning.

Palms can be successfully transplanted whenever the ground is warm and moist. October is good, if you have rains to wet down well. December and January are not good, because the ground is apt to be too wet and cold. February onward is all right, and October is very good, if the plants are not in too active growth to transplant well. The palms have fibrous or rosy roots and transplant easily. Take them up with a good ball of earth if you can. Grape cuttings should be planted out for rooting when the ground becomes warm in the spring. The apricot is the most beautiful of our fruit trees and best for a house yard. The Monterey pine is a good tree in the interior, if you want a conifer; the pepper tree, if you want a pretty-leaved evergreen, and the maple, if you want shade in summer and sun in winter.

### High Priced Hillside.

TO THE EDITOR:—What would you recommend for a hillside with western exposure? What crop would bring return on land costing \$150 per acre? It is most too steep for prunes. Is so situated that eucalyptus trees would not rob other trees. Have you figured if grapes pay better than trees where wood is worth \$8 a cord?—STUDENT, Saratoga.

We should say that a crop of two-story ocean-view villas would be best if you are reasonably sure of a market. Steep hillside at \$150 per acre is a hard basis for ordinary cropping. We should consider it out of sight as a stove wood scheme. It might do for grapes if it has particular advantages in point of quality or season. We should consider the grapes as preferable because they might possibly pay, while the eucalyptus never would.

### Windbreaks.

TO THE EDITOR:—What is the best distance to plant Australian blue gum and Monterey cypress for a windbreak? Does the Monterey cypress make a good windbreak by itself?—PETER MACARDEL, Napa.

Ten feet apart, alternating eucalyptus and Monterey cypress, makes a good winbreak. The advantage of the association is that the eucalyptus soon runs up and is bare poles below, and the cypress makes a good windbreak by itself, but it does not reach the height of the eucalyptus. So if you want the wall both high and tight use the two together.

### A Philippino Bug Catcher.

TO THE EDITOR:—I have a son in Manila whose business has caused him to travel a good deal in the country. He knows the little vinehopper which has given us such trouble here and writes me that he believes he has found his enemy. It is a lizard that inhabits that country and consumes quantities of them. He offers to have the creature caught and forwarded if we desire. What do you

think? It seems to me quite doubtful if any lizard could be a match for the hoppers, unless he is a very early riser and gets up with a specially sharp appetite. Then, there is the question of the lizard finding this climate acceptable to him. He may become torpid in the winter and decline to "improve each shining hour" by eating the hibernating bugs. What can you say to me about them?—JOHN T. DOYLE, Menlo Park.

We should think it would be very problematical whether a tropical lizard would live at all in California, where climatic conditions are so different, and, if he did live, whether he would have energy enough to cope with the vinehopper. We imagine that, like other tropical inhabitants, he would lie in the shade, or in the sun, and wait for something to drop into his mouth. We should expect more from the multiplication of the American toad than from the introduction of the Philippino lizard.

### Gas Lime for Fruit Trees.

TO THE EDITOR:—What value as a fertilizer for apricot trees has the refuse of a gas house? It is lime with impurities of gas, sulphur, ammonia and iron. It can be bought at a dollar a ton. Would it pay to haul four miles if not used too freely? I know they hinder borers and are good for hen houses.—STUDENT, Saratoga.

Gas lime is too actively destructive of vegetation to be looked upon as a fertilizer. It has to be used with the utmost circumspection even as an orchard insecticide, and we refrain from commending it even as a treatment for root insects, because of the danger of tree killing. Under such circumstances it seems unwise to look upon it as a fertilizer of any practical value.

### Cement Floor.

TO THE EDITOR:—How many square feet will one barrel of cement cover in making floor for cows?—READER.

The area depends, of course, upon how much sand and rock you use with the cement and how thick you make your concrete layer. When you know those things the question is simply one of cubic equivalents between the mortar pile and the floor spread. Any bright boy can figure that out nearly enough for practical purposes.

### A Hard Question.

TO THE EDITOR:—What kind of an ornamental tree or bush is best for a place where there is very little soil, and where it would have to be blasted in order to start them properly? It is also very dry.—NEW SUBSCRIBER, Sonoma.

The Monterey cypress will stand about as hard conditions as any tree known to us.

### Cutting Back Prune Trees.

TO THE EDITOR:—Some of my Silver prunes have long, bare limbs, with very little life in them. Would it injure the tree to cut them off to the next healthy shoot before the leaves fall?—NEW SUBSCRIBER, Sonoma.

They can be removed at any time. The best time to remove a branch with very little life in it is just as soon as you discover it to be in that condition.

### Pear Grafting --- Orchard Cover.

TO THE EDITOR:—Can you graft Winter Nelis pears on the Flemish Beauty or Seckel, the trees being quite large? We have a number of each and do not care for them. What grass can one plant after first rain in the orchard that will make fast winter growth, save the wash from heavy winter rains, and do to turn under in the spring for green manure? We are 2000 feet in the mountains, have early and late frosts and a little snow.—SUBSCRIBER, Lake county.

You can graft the pears as proposed. The pear is one of the easiest of trees for top-grafting.

Probably nothing will do as well as rye to secure winter growth for ground cover, where you have as much frost as you speak of. We know of no grass which will grow so quickly and thickly at low temperatures as the cereal rye. It is not so valuable for green manuring, but we are not sure of a legume which will endure your low temperatures.

### Not a Very Bad Weed.

TO THE EDITOR:—I enclose sample of a new plant or weed that I see first this year in land used by me for twenty-five years. It is in new sown alfalfa. It has scarcely any leaf, but a soft, narrow leaf something like a cedar.—G. L. CRUM, Rio Vista.

It is not a very bad weed, but it is undesirable as taking the place of better plants. Its name is *Lythrum hyssopifolium*, and it comes from Europe. It likes moisture, and perhaps came by irrigation water, or it may have been in your alfalfa seed. The plant in

Europe is an annual, and unless it takes on perennial habits here, as some plants do, it ought to be easily eradicated by pulling before seeding.

## WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending October 8, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

### SACRAMENTO VALLEY.

Rain has fallen in all parts of the valley and in most sections has been more beneficial than harmful. Timely warnings had been given, and wherever practicable fruit on trays were stacked; in some cases it was impossible to secure sufficient help, and considerable fruit was damaged. In the grape districts Tokays were seriously damaged and some injury was done to raisins, where stacking was impracticable. Beans were nearly all gathered and in storehouses. Pasturage was greatly benefited. The soil is now in fair condition for plowing. Oranges and olives continue thrifty.

### COAST AND BAY SECTIONS.

The heavy rainfall during the week, in some places amounting to more than 2 inches, has caused considerable injury to wine grapes, and in some sections has slightly damaged raisins and fruit on trays, but as warnings had been given most of the drying fruit had been stacked and escaped injury. Beans were also slightly damaged, and in some places barley in sacks was injured. Apples in Humboldt county were damaged by high winds. Pasturage was greatly benefited. The soil is now in good condition, and plowing and seeding will become general. High winds at San Rafael on the 3d uprooted a mulberry tree 50 feet high and 6 feet in circumference.

### SAN JOAQUIN VALLEY.

The rainfall during the week was light compared with that of the Sacramento valley and coast section, varying from 0.10 to 0.97 in different localities. Raisin making was somewhat retarded, but as ample warning had been given, very little damage was done to drying fruit, except in cases where paper trays were used. The second crop of grapes was slightly injured. Pasturage was greatly benefited by the rain. In many places the rainfall was sufficient to enable farmers to commence plowing. Preparations are being made for sowing a large crop of grain.

### SOUTHERN CALIFORNIA.

Generally fair, warm weather has prevailed during the week, with light sprinkles of rain in some sections. Raisin making and fruit drying have progressed rapidly. Wine making is nearly completed. Tomatoes were slightly damaged by the heat of the preceding week. Oranges are ripening rapidly and will probably mature much earlier than usual; there will be a heavy crop. Walnut picking continues and much of the crop is nearly ready for market.

LOS ANGELES SUMMARY.—Rain damaged beans in some localities; in other places did no injury. The rain, otherwise, was generally beneficial. Oranges are further advanced than last season; are of good size and coloring fast. Raisins are mostly cured.

EUREKA SUMMARY.—Plowing in some sections. Digging potatoes and gathering apples is general.

### Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Oct. 10, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.....	Total Seasonal Rainfall Last Year to Same Date.....	Total Seasonal Rainfall to Date.....	Average Seasonal Rainfall to Date.....	Minimum Temperature for the Week.....	Maximum Temperature for the Week.....
Eureka.....	.52	1.73	1.30	1.49	44	62
Red Bluff.....	1.70	2.01	.02	.84	48	84
Sacramento.....	.48	.68	.02	.30	46	86
San Francisco.....	.34	1.11	T	.57	50	84
Fresno.....	.08	.42	.00	.44	46	90
Independence.....	.00	.76	.19	.25	42	80
San Luis Obispo.....	1.00	1.20	.00	.65	48	98
Los Angeles.....	T	T	.01	.28	50	82
San Diego.....	.08	.08	.07	.17	54	70
Yuma.....	.00	.02	.08	.72	..	..

### The Fruit Growers' Convention.

President Ellwood Cooper and Secretary B. M. Le-long announce that the twenty-fifth State convention of fruit growers will convene at San Francisco in Pioneer Hall under the auspices of the State Board of Horticulture, on Tuesday, Dec. 4th, and continue in session four days. A cordial invitation is extended to all fruit growers and others interested in horticulture and kindred pursuits to be present.

Subjects of the utmost importance to the fruit industry in general will be considered. All fruit exchanges, associations, Granges and other associations of producers are requested to send representatives. The Southern Pacific Company and the San Francisco & San Joaquin Valley Railway Company will issue excursion tickets to all persons going to the convention, permitting a return, at one-third of the regular rate, provided a receipt for the ticket purchased be taken at the starting point.



## THE DAIRY.

### California Dairy Industry.

Address of PRESIDENT WILLIAM JOHNSTON, of Courtland, at the Recent Dairy Convention.

In the last report of Secretary Wilson of the Department of Agriculture he well says: "When we consider that half the people of the United States are occupied in producing from the soil directly; that about three-fourths of our exports to foreign countries come from the soil, and that the \$600,000,000 balance of trade coming to the United States during each of the last two fiscal years have been, to a great extent, the price of farm products, it is somewhat remarkable that so very little attention is given to the education of half the people of the nation and their preparation for their future life work."

When one realizes the value of the different agricultural crops of the country the product of the mines and the output of the factories dwindle into insignificance. The wheat crop of California last year was estimated to be worth over \$20,000,000. Under an improved system of agriculture and with a better knowledge of irrigation, conservation of water and fertilizers, a small percentage of increase in the output would add millions of dollars to the wealth of California. The dairy products of California for 1899 were estimated to be worth nearly \$13,000,000. With improved breeds, improved feeds and improved care, probably without the increase of a single animal to our dairy herds, this product could be doubled, and the dairy product of California would thus become more valuable than the gold output of the mines of any State or Territory in the Union.

When one contemplates the possibilities of an educated, scientific population the value of any organization or institution organized for the promotion of that education becomes of immediate apparent value. This agricultural education, upon which I feel that I cannot dwell too long has a side other than the material which means equally as much to the well being of our State. The agricultural population of any community is a stable, thoughtful, moral, sturdy class which makes up the stuff of which great cities is made. They are conservative, independent and patriotic and while any country contains a sufficiently large class of this population, its independence and its prosperity is assured.

A general education in dairy farming introduced in any community means much toward the upbuilding of any population; it promotes the subdivision of large tracts, tends to diversify products and makes farm life interesting. Without exaggeration and without bombast we may safely say that California is the greatest State in the Union. She has been endowed with a combination of soil, climate and geographical location which has marked her for a great destiny. It is in our hands to work out and realize this destiny for ourselves, our children and for humanity. A State is strong in her products. She is built up and strengthened when her productive capacity is increased, and he who opens her mines, reclaims her lands and adapts them to production is as much a patriot and entitled to her gratitude as a statesman who forms her politics or a soldier who defends her integrity. It is frequently the homely and the modest virtues which are solid and which endure and by improving the industry which we have organized to serve, we can do as much for California and go as far towards realizing her destiny as those of our citizens who occupy more showy stations or advance more ornamental or artistic industries.

**DAIRY PROGRESS.**—The progress of California in dairy lines during the past year has, all things considered, been satisfactory. The drought of the preceding years did much to reduce our herds, and the new cattle which have been bought and bred to take their places have been of a better class. The State, especially in the northern part, enjoyed a reasonably good rainfall, with consequent abundant pasture and grass crops and the butter product of the State has been considerable. There has been a steady increase in the number of creameries operated in the State and with the growth and multiplication of creameries there has been a commensurate improvement in the handling of our cattle, their feeding, care and selection. The Farmers' Institutes held throughout the State during recent years have disseminated valuable information which is already showing itself in improved methods by our farmers and improved interest in dairying, especially upon the part of the young men whom it is the interest of the State to keep upon the farm, and who soon will be qualified to take up the work where we leave it off.

**DAIRY INSTRUCTOR.**—After much agitation the regents of our State University, at the solicitation of the progressive and enterprising president of that institution, have appointed an instructor in dairy industry who will take up the study of dairy methods in California and the conditions which are peculiar to this State. It is with great pleasure that I express to President Wheeler the thanks of the dairymen of California for his much appreciated efforts in their behalf, and it is with much satisfaction that we welcome to our midst to-day the capable gentleman he

has so wisely selected for the position of dairy instructor. There is a great work before Prof. Anderson, which we are confident he will ably execute. The conditions which exist here are peculiar to us, and he has a new field which should be full of interest to him and with a promise of great value to the dairymen of the State.

**DAIRY IMPORTS.**—California still continues to import a very large percentage of the dairy products used and handled in this State. It is inexcusable, and while it lasts will continue to be a reproach to the farmers and dairymen of California. We have in this State some of the best and cheapest dairy food in the world. Alfalfa grows here over wide areas, and in our even, temperate climate produces heavily. Barley grows abundantly, and takes the place of the cheapest oats of the Eastern States. Corn is a regular crop and yields heavily. Kaffir corn, so much grown in the Middle Western States, and which, as a dairy food, so well supplements our alfalfa, making with it an easily balanced ration and a very cheap and satisfactory food, has not been grown here to the extent which its merits would justify. Sugar beets and mangels grow with us to mammoth size, and in our climate are unusually rich in saccharine and other food properties. Our climate makes it possible to handle cattle cheaply and healthfully. This condition was remarked upon most favorably by Prof. Pearson of the dairy division of the Department of Agriculture, who was with us at our last session. The early dairy methods practiced here were crude and careless, and while much improvement has been made, as I have before remarked, much still remains to be done.

**DAIRY STOCK.**—In the matter of breeding our dairy cattle, I believe we are far behind the more progressive States of the Union. The average butter product per cow of the dairy cattle of California, I may safely say is not much, if any, over 50% of what it should be. This is a violation of every economic consideration, and is one of the first questions the improvement of which is indicated. An examination of the records of the State Dairy Bureau at San Francisco will show that many herds in this State will average less than 100 pounds of butter per year, and that the average butter product per cow of all the dairy cows in the State will not exceed 150 pounds per cow per annum. Many individual cows have produced over 500 pounds per cow, while in some instances twice that product has been reported. Many herds in well conducted dairy districts in the East produce over 300 pounds of butter per cow per annum. If these results could be obtained here, it should be improved upon here; that they can be is a matter of certainty, rather than speculation. In the last report of the State Board of Agriculture a dairyman from Humboldt county reports that his cattle during the previous year averaged 339 pounds per cow, while in a preceding year they had produced 411 pounds per cow per annum. All of which was done without grain and while the cattle were running in the open air. Another dairyman reported a yield of 255 pounds on alfalfa feed alone, no grain being fed and no particular effort being made to breed or procure animals of recognized dairy breeds. What these men have accomplished others could; and if the things they have failed to do were done by those who sought to improve upon their methods a great improvement would certainly be realized.

While the conditions here are such as to require little care of dairy animals, a considerable amount of care will be profitable and desirable to our dairymen, who learn the economy of properly protecting their animals from the weather and feeding them in plenty and in comfort.

**DAIRY PRODUCTION.**—This organization should interest itself in the enforcement of laws against bogus butter, sophisticated butter or oleomargarine, should endeavor to aid in the detection of adulteration of butter, and endeavor to enforce cleanliness and to extirpate disease. We should take an active interest in the enforcement of laws looking to these facts and co-operate with all bodies, societies and officials existing for that purpose. This work of improvement in manner and method should be a steady improvement all along the line, in which all should co-operate, the schools, farmers' institutes, the agricultural department of the State University and of the State agricultural department all should do their part. The agricultural papers should be a great factor in this work of dairy progress, and public spirited dairymen and managers of creameries should aid in this valuable work.

I have in mind the management of a San Joaquin creamery where the manager subscribed for dairy papers and sent them to his patrons. He employed an assistant to visit the farms and skimming stations, give advice to dairymen, instruct them in better methods, and insure cleanliness and healthfulness. The manager advised with his patrons as to the best methods of increasing their dairy product, instructed them how to feed and how to breed that they might obtain the best results. He aided them in the purchase of dairy cows and by systematic action provided for the purchase of carloads of pure bred sires which he introduced into this section and sold to his patrons at cost price. You will find the product of the creamery taking very high rank and you will find its patrons are prosper-

ing, while those in less progressive communities are faltering and failing. A great responsibility rests upon the management of creameries, and they should all be centers through which instruction should radiate to every person who patronizes them. The test at these creameries should be scrupulously exact, and they should be made in the most scientific methods and bottles used which had been recently tested. I recommend that a law be enacted in this State, as has been done in many other States, providing a penalty for the use of bottles in a testing apparatus which were not accurate and honest.

**PUBLIC HEALTH.**—I approve most heartily all that has been done to improve the healthfulness of California and of the world, but I deplore the methods which have been frequently employed to bring about this action. That some dairy cattle are diseased is undeniable, but that more disease exists in dairy products than in any other article of diet I most emphatically deny. The agitation against the consumption of diseased dairy products has been too much specialized. This agitation has worked a great harm in discouraging the consumption of the best and most nutritious food which Providence has bestowed upon us. Let us by all intelligent methods seek to prevent disease, but let us do nothing to needlessly alarm the people nor discourage the consumption of the greatest and best of nature's foods.

### The Principles of Cheddar Cheese Making.

By LEROY ANDERSON of the University of California at the State Dairy Convention at Sacramento.

If we think of cheese in its simplest form it may aid us in understanding more thoroughly the method of its manufacture and the reasons why each step is taken in the way that it is when the cheese is properly made. Let us look upon cheese as a milk product made by removing a large part of the water and putting the remaining solid portions in such a condition as to be easily preserved for a long time, and to be palatable and readily digestible. From milk containing upwards of 85% of moisture is made a cheese containing about 35% of moisture. We retain the food value of the original milk so far as such is included by the butter fat and casein, while the sugar and albumen are lost in the whey.

The forces used to remove the surplus water and retain the actual food constituents are natural ones, and the successful cheese maker is the one who can best control and use these natural forces in preparing the finished product. There is nothing to be done which is not governed by nature's laws and actions, which, if the cheese maker understands his work, is not only made easy but also a delight.

**GOOD MILK THE FIRST REQUISITE.**—Before the cheese maker begins his work there is something to be done in order that he may be successful. No man can make a first-class or fancy cheese out of poor milk. Thus the farmer—the producer of the milk—must feel his responsibility and co-operate in delivering his milk to the factory in as good condition as possible. It should be perfectly clean and free from dirt, and it should also be kept sweet and free from taints of all kinds. Allowing dirt to get into the milk not only looks badly in itself, but may also introduce bacteria, which sets up undesirable fermentations. Odors of the animal, barn or stable which get into the milk are carried through the whole process of making the cheese, and can never result in a clean curd. If the milk is sour when it reaches the factory, it "works too fast" and results in a loss of fat, besides almost always carrying a taint along with it. These few suggestions will show how necessary it is that the dairyman feel his responsibility in delivering good milk to the factory.

**HANDLING THE MILK.**—Having the milk in the vat, the first step is to determine its degree of ripeness, i. e., how much lactic acid there is present. The lactic acid fermentation is probably one of the most important factors in cheese making, and thus the necessity of the cheese makers knowing how far it has progressed before he begins work. This may be determined by an alkaline test, as is used in cream ripening, but a simpler method is to use a so-called rennet test. Rennet tests are useful because of the fact that rennet acts more quickly upon milk the riper it is. Adding a known quantity of rennet of known strength to a given quantity of milk, and watching the time required for coagulation, will thus indicate the ripeness and whether the milk is ready to "set." A vat of milk should not be set, i. e., the rennet added, until there is enough lactic acid developed so that the milk will coagulate sufficiently for cutting in at least thirty minutes. If the rennet test, then, shows too little lactic acid present, a "starter" should be added. It may be an artificial one, but in any case it should be pure and clean. The milk is heated to about 84° for "setting," because at that temperature both the lactic acid germ and the rennet work fairly rapid and at the same time the butter fat is not injured by excessive heat.

The constitution of the milk after it has been coagulated by the rennet is thus described by Prof. Wing in his book on "Milk and Its Products": "92.5 parts are soluble and 7.5 parts insoluble. The soluble por-



tions are made up of water 87 parts, sugar 4.5, albumen .75, ash .25. The insoluble are made up of casein 3.25, fat 3.75, ash .50. The separation of these two is the chief task of the cheese maker, and is brought about partly by mechanical and partly by chemical or physical agents. The chief mechanical agents in the separation are cutting the curd, stirring, and the application of pressure. The chemical and physical agents in effecting the separation are, first, application of heat; second, development of lactic acid; third, addition of salt; fourth, curing fermentations."

Cutting the curd makes the contraction of the casein and the resulting expulsion of the whey more rapid and easy. It is now considered by the best makers of cheddar cheese that the curd should be cut rather finely, and a  $\frac{3}{4}$ -inch knife is recommended for the purpose. A fine cut makes more surface for moisture to escape from and the whey can thus be more quickly expelled. The cut surfaces are soon coated with a kind of membrane, resulting from the contraction of the curd. This membrane is pervious to water, but retains the globules of fat. Some fat is lost in cutting the curd, owing to the globules being cut through by the knife, and for this reason the cutting should be as carefully done as possible, and also any subsequent heating of the particles of curd should be avoided.

Stirring the curd begins as soon as the cutting is done in order to prevent the particles from matting together and to keep them evenly exposed to the heat. If the curd mats together it must again be broken apart, when more fat is lost. Hence the importance of continual and gentle stirring.

Soon after stirring begins the heat is turned on and the temperature gradually raised to about 98°. The time required for the heating should be in the neighborhood of forty-five minutes. Heating accomplishes a double purpose. To a slight degree the heat itself contracts the curd and aids in expelling the moisture. The rennet acts more vigorously as the temperature rises and to some degree assists in removing moisture. But most important of all the forces in contracting the curd is the lactic acid, which is produced much more rapidly at the increased temperature. The time to stop stirring is when sufficient moisture has been expelled from the curd, which point can be told only by experience. If at the same time enough lactic acid has developed, the whey may be drawn from the vat. If the hot iron test does not show sufficient acid, the curd is allowed to settle to the bottom of the vat until it has enough acid. Lactic acid fermentation goes on much more rapidly when the curd remains in the whey, because practically all the milk sugar from which lactic acid is formed is in the whey. When the hot iron, therefore, shows that the curd has sufficient acid developed, the whey should be taken off as quickly as possible.

**CHEDDARING.**—The so-called "cheddaring" process begins when the whey has been removed from the vat. By this time the particles of curd have matted themselves quite firmly together. Then this mass is cut into blocks of convenient size and turned once over. Following at frequent intervals the blocks of curd are turned and piled one upon another until the curd is changed from a tough, spongy mass into a smooth, elastic, fibrous condition. Various changes take place during the cheddaring process. The pressure of the particles of curd upon one another serves to remove most of the whey which still remains. The temperature is kept high enough so that the production of lactic acid is not checked, the effect of which is to cause the breaking down of the casein, as is seen in the changed curd.

Grinding the curd after it has gone through the above changes is simply to get it into small pieces so that the salt may be thoroughly incorporated, and that it may be pressed into a solid mass in the cheese. The salt serves to make the curd drier and also to harden the curd and partly check further development of lactic acid.

**CURING.**—The cheese having been pressed and placed upon the shelves of the curing room, there still remains some attention on the part of the cheese maker in order that the natural forces in the cheese may have opportunity to produce a good article. Green cheese is tough and indigestible, and it must go through a series of fermentations, which will result in breaking down and rendering soluble the casein. It is not well understood what these fermentations are. However, it has been found that they take place to the best advantage in a temperature of about 70°, and the ideal condition seems to be such a temperature for the first ten days, after which period a temperature of 60° until the cheese is ready to market. The degree of moisture in the curing room is also an important consideration. If too dry, the cheese dries out; if too damp, it molds. During the first ten days have the room rather dry, so as to form a good rind, and afterwards there should be more moisture.

A proper development of lactic acid being, then, the great governing factor in cheddar cheese making, and this development being under the control of the maker through his management of the temperature, would make it appear that this variety of cheese can be made in any place where the proper temperature can be provided in both making and curing. Some minor circumstances, such as richness

of milk, influence of feed, etc., may have some bearing, but all these can be overcome by the skill of the maker. It has been found almost universally that when consumers have once had a taste of the best quality of cheddar cheese they desire it in preference to all others of similar make, and it is to be hoped that the dairymen of our State may soon be able to supply what their own markets need in this line.

## THE SWINE YARD.

### The Hog an Adjunct to the Dairy.

By ELIAS GALLUP, Hanford, at Seventh Annual Dairy Convention at Sacramento.

The breeding and feeding of good hogs is of primary importance to every dairyman from a financial standpoint, and the rearing of such breeds as are best adapted to different localities and surrounding conditions is a necessity. The dairyman who expects to make money from his business in this era of small profits must be educated in his work. He must know a good cow, how to feed and how to make the butter or cheese. One of the important problems which he has to solve is how to produce good milk at the least cost. He also should be educated and know how to utilize the by-products of the dairy. He should know a good feeding hog from a poor one, as the hog that eats the skim milk and buttermilk must be a good feeder in order to be profitable. The feeding of the hog must of necessity be carefully studied.

Intelligent and economical feeding is half of the battle. The by-products of the dairy are expected to pay their portion of the profits. By economical, we do not mean that the ration should be stinted, but that it should be fed in a way that will produce the most pork at the least cost. There was a time, and not many years ago, when little was known concerning the chemical constituents of feedstuffs, and just as little about a balanced ration; but now this knowledge is within the reach of all who choose to inform themselves. There are two good works on feeding animals. Prof. W. A. Henry of the Agricultural Experiment Station of the University of Wisconsin has published a book entitled "Feeds and Feeding," which any feeder of swine can secure at the small price of \$2. There is no excuse for ignorance on this subject at the present time. Many think there is as much in feed as in breed. Among those who think so are some who try to feed well, but who give themselves very little trouble about breeding their own hogs or about how the hogs they buy for feeding purposes have been bred. This is a mistake which will in the main account for swine not responding to feed more readily and with better results.

**BREEDING AND FEEDING.**—Breeding and feeding are twin companions that should be about as inseparable as the Siamese twins were. Well-bred hogs should be good feeders unless breeders themselves lose sight of one of the most important characteristics, namely, good digestion and food-assimilating capacity, which is generally associated with constitutional vigor.

The desirable hog, and the sort that the breeders should aim to breed, should have the feeding traits referred to in a marked degree. These are the sort that commend themselves to the average dairyman or farmer who care but little for fancy markings, but want hogs that will respond quickly to food given them. Many farmers and dairymen have not, as a rule, had much experience in feeding and caring for pure-bred hogs. Breeding and feeding pure-breds is to them a sort of mystery.

**STUDY THE HOG.**—Every dairyman, as I have said before, should study and know as much about raising hogs as he does about making butter and cheese, for feeding his skim milk to poorly bred hogs is a great loss to him. The old scrub cow, the dash churn and the razor-back hog should be a thing of the past. Dairymen, discard the scrub hog! You can not afford to keep him when the margin is so small as at present. He is not the poor man's friend and is the rich man's enemy. He requires more feed and makes less pork than a high-grade or pure-bred hog. Here again consider the cost of production. If you are hard to convince, buy a thoroughbred pig and place him with a lot of common ones of equal age; give same feed and carc, and in a short time the weights will convince you, to say nothing of the superior symmetry of form and finish which so please the buyer's eye and bring more money. We admit that the razor-back hog, the scrub cow and the dash churn served well and long and still have many backers who stand by them, and will always be standing there as immovable as Lot's wife.

**WHAT BREEDS?**—What breed of hogs should the dairyman raise to make the most money out of them? I will say I do not consider that there is much difference between the Berkshire and the Poland-China. The experiment stations have at different times fed an equal number of each breed, and the experiments showed that there was practically no difference in the food requirements for a given gain. Many feeders are prejudiced against the above breeds. They say they are not prolific and have lost their

vitality by inbreeding. That is all humbug. There is no hog on earth that has more vigor than the Berkshire and Poland-China. We often hear it said that the Berkshire is too wild and hard to manage. He has lots of action, and, if properly treated, is very kind and gentle. He is high-tempered and will not stand unkind treatment.

**THE BACON HOG.**—There has been a great deal written in regard to the bacon hog and the English market and that the Berkshire and Poland-China are not good bacon hogs. Even our worthy Secretary of Agriculture, Mr. Wilson, has said that we should raise Tamworths. Wise men sometimes make mistakes. The pork producers of the United States will never take kindly to the long-nosed, slow-maturing, ill-looking Tamworths, but are quite willing that Canada, Ireland and Denmark should supply the snob swell restaurants of London with the quality of bacon they desire. The hog raisers of the United States prefer to raise and supply the armies and navies of the world with a quality of pork that does not cost as much to produce it.

The statistical department of the Government has recently made a careful estimate of the number of hogs raised in the world and the figures are placed at 122,376,000, of which the United States is credited with 69,000,000, equal to 54.4% of the entire world's supply, and could raise as many more if desired.

The school teacher said to Johnny: "The world moves around." Johnny said: "It has to to keep out of the way of the United States."

**A MATTER OF FORM.**—I would say to you, fellow-dairymen, if you choose a Poland-China, do not be particular about fancy markings; a few white spots on the body belong there. The large rangy, well-formed ones are generally the good feeders. The short, chunky ones will feed well for a short time and then cease to respond to food given them. Avoid very heavy flabby jowls, as such are inclined to throat and lung troubles. As to the feeding qualities of the above breeds, there is some difference in individuals. Dairymen in selecting to raise and feed should select hogs with long, deep bodies, heavy hams and good, strong bone. A hog with a weak leg and a poor foot is not profitable for the feeder, for, when a hog's foot is sore and he is lame he does not fatten nor grow, hence the importance of having good feet and strong, flinty bone. The experiment stations have conclusively proven the fact that the bone of animals can be hardened, strengthened and improved by the food given them.

**FOODS FOR DAIRY HOGS.**—Breeders of pure-bred swine will find dairy by-products of the highest utility in producing pigs of model form and strong bone. Pigs, especially those designed for breeding purposes, should be fed foods rich in protein, since these favor the development of bone and muscle. Middlings are the best single feeding stuff for young pigs and should be used whenever possible. Skim milk and buttermilk are of the highest value when obtainable. An ideal mixture would be about eight pounds of skim milk and three pounds of middlings. With good grass pasture to exercise in, pigs designed for breeding purposes can be fed practically to the limit of their desire. No materials are more generally useful in all stages of swine feeding than skim milk and buttermilk. They should be supplied only in limited quantity to brood sows before farrowing, after which the limit need scarcely be set.

There is a great difference of opinion among dairymen as to the value of skim milk and buttermilk. A great many dairymen rate skim milk at 10 cents per 100 pounds; some put it as high as 15 cents per 100 pounds. There are a good many careful feeding experiments which prove it to be a substitute for other feeds, and, as a growth maker, from 20 to 25 cents per 100 pounds. The truth is that the value of skim milk depends on the condition when fed, on the kind of hogs to which it is fed, on the supplementary feeds fed with it and on the skill of the feeder.

**HOME-RAISED HOGS.**—Dairymen should breed and raise their own hogs. A neighbor of mine who has been raising hogs for many years told me that he lost his whole herd by buying a few hogs, thereby bringing disease onto his farm. Until the mass of swine raisers have a clearer knowledge of the laws of sanitation, we may expect disease among our swine. One negligent man may by carelessness and filth start disease among our swine that may sweep other herds and soon become an epidemic. The public suffers by the carelessness or lack of knowledge of one man. Negligence by one may cause loss to many. When will the average farmer learn to treat a hog humanely? It will put dollars into his pocket that now rattle with the chink of pennies or are so empty that they fail to rattle at all. The time, I am happy to say, is rapidly passing on many of our farms when anything is good enough for a hog. Stagnant, foul water, moldy grain and all other refuse of the cellar and kitchen, with the vilest sleeping quarters imaginable reeking in filth, an abundance of food today and nothing to-morrow were often his only share of the proceeds from the abundance of broad acres, well-tilled fields and overflowing granaries.

Negligence, indolence and filth are the offspring of ignorance, and the diseases to which swine are subject take their epidemic form in localities and on farms where the laws of health are ignored and nature is forced to inflict the penalty of her violated



laws. As the laws of disease and of health are the same in animal life, it is fair to assume that the diseases that sweep away our hogs are largely the sequence of the lack of knowledge on the part of the people who keep them. The outbreaks of any of the pestilential diseases may seem to spring out of the earth and come without warning, and we are wont to excuse ourselves by meekly asserting that it is a mysterious Providence. I have been breeding Poland-China hogs for over twenty years and have never lost any by disease, while my neighbors have lost at different times a great many. Disease often starts with some small half-starved pig, and, as I have said before, by negligence on the part of the owner.

**PREVENTIVES.**—You may ask what I do to prevent disease. In the first place, I have my breeding hogs in good condition. I never allow my hogs to travel about the neighborhood nor other hogs to come on my place. If a sow shows any weakness about the back or legs, I send her to the butcher. I breed from those that are strong and healthy, feed well and keep them at work. Wood ashes fed to young hogs help to keep them in condition. I do not like to keep hogs in pens, but prefer to keep them in lots where they can exercise. If obliged to keep them in pens or small lots, change from one pen to another and plow or dig up the vacant lot. Hogs kept in pens with floors will soon get out of condition, and should be turned out occasionally where they can get to the earth, as they require fresh earth to eat to regulate their system. Several years ago two Englishmen imported a Berkshire at great expense from England. I went to see the new purchase. I found a second-rate Berkshire in bad condition from the long journey. He was in a pen built up from the ground several feet high. I begged them to take him out and let him exercise. They politely told me that they were educated in an agricultural college in England and understood pigs quite well. It occurred to me that a little knowledge without common sense is a dangerous thing. The hog was starving for a few mouthfuls of fresh earth to regulate the system and a chance to exercise.

**THE FUTURE.**—In conclusion, I will say that, year after year, the demand for pork grows larger, and will so continue just as our country grows. There can never be an oversupply of hogs, though there will be a demand for a better grade, which the swine breeders of this great State must endeavor to help supply. Good hogs will always find a ready market at prices that will easily pay for extra care and food. France, Germany and other European countries have objected to our American corn-fed pork, not because it is not good, but they wished to protect the producers of their own country. Civilization at the present time is aiming a mighty blow at barbarism. The peace of the world has been broken, and only a prophet can forecast the consequences; but if the civilized nations of the world are to dip the points of their swords in the blood of the heathen, the meat producers of America must take note. The armies of the world, afield, must be provisioned from the farms of America.

I will say to you, dairymen of California, that some one will be knocking at your door for you to furnish your portion of the meat, butter and cheese. Above all, let us lift up the swine-rearing industry of this great State to a still higher standard, and, by so doing, we dairymen will make more money. The hog, as a commercial animal, is a most important factor in all that concerns progress and civilization. Therefore, to make the most money out of him, he should be squarely dealt with and given full credit for what he does. As an adjunct to the dairy, you can not get along without the hog.

## THE VINEYARD.

### Grape Growing in San Diego County.

By G. F. MERRIAM of Twin Oaks, San Diego County, at the Escondido Farmers' Institute.

From 1880 to 1884 there was a "boom" in vineyard planting. It had been found that excellent raisins could be made in California. So, from Fresno to San Diego the Muscat grape was planted by all sorts of people and on all varieties of land—each one anticipating a fortune in raisin growing.

In this section a few vineyards had been planted years before this time. A. E. Maxey had quite a large vineyard of Missions, planted in 1854, which still survive and bear fine crops. There was a small patch of Missions in San Pasqual on the old Manassee place that was old when I first saw them in 1875. W. J. Whitney, who used to live 3 miles west of here under the shadow of Whitney's Peak, was doubtless the first one to plant the Muscat grape in any quantity, but he did not make raisins until 1882. His crop usually sold for table use, sometimes at 4 cents per pound.

In common with many others, I caught the fever, and in 1879 planted five acres of Muscats, following in 1880 and 1881 with twenty-five or thirty acres more. The Escondido Land Company planted a large vineyard in 1884—now in full bearing. As time passed on it was found that all was not as pictured.

Many had unsuitable land, and all discovered that, for climatic reasons, our grapes did not ripen early enough to dry them before the winter rains. To obviate this some "sun driers" were built, but were not a success, the fruit rotting on the trays. Many fine crops were ruined by rain when only half dry; so that in the course of time many vineyards were uprooted and trees or grain sown in their place.

While this disintegration was going on, a new disease appeared at Anaheim which wholly obliterated the vineyards in that section. The disease spread to this section and destroyed most of the vines along the San Luis Rey valley. It appears to have been most virulent in deep, sandy soils without clay subsoil.

After losing a large crop by early rains, I grafted a few acres of Muscats into wine varieties, and, in order to test as many kinds as possible as to their adaptability to this region, some sixty different kinds were planted, with the result that not more than six or eight were finally selected for uniform large crops of first-class wine grapes.

As time passed on and the crops were made into wine, it was found that to make a good dry wine, or one from which all the sugar of the grape had been fermented, required large establishments and greater technical skill than the majority of us possessed; so when Congress passed what is known as the "Sweet Wine law," and the crops were made into sweet wine, it was discovered that at last a way had been found that led to success.

Our grapes developed the sugar wanted and made a class of wine equal to any made anywhere in California.

**PLANTING CUTTINGS AND VINES.**—In planting a vineyard I would advise all who can do so to put two cuttings together in a hill. Leave but one bud to each cutting above ground and let those buds rest against the button on the planting wire, spreading the butts so that the cuttings shall stand at an angle of about 45°. The following year, if both cuttings live, one should be taken out.

When planting rooted vines cut all the roots off within  $\frac{1}{2}$  inch of the stock before planting. Then about all will grow and form a new and perfect series of roots. The reason why two cuttings are advised is that one is more likely to get a good stand, while, when both fail, there will be enough well-rooted vines ready for the next year's planting. The filling of all vacant spaces with well-rooted vines should never be put off beyond two years, because it is found almost impossible to get a perfect stand afterward.

Use no cuttings from north of Tehachapi on account of phylloxera, which is destroying the vineyards in the northern part of the State.

**CULTIVATION.**—Keep your vineyard well cultivated and it should bear good crops—two plowings in the winter and plenty of cultivation to keep weeds down and the surface loose. Cultivation necessarily ceases in all old vineyards about the time of blooming—the 25th of May.

**PRUNING.**—Prune as soon as the leaves fall, usually about the 1st of January—the first year to three buds on a straight stem, the second year to two spurs of three buds each—forming a Y—endeavoring to form the head or crown of the vine not less than 16 to 18 inches high, so that in the years following the fruit may never rest on the ground.

With Muscats for raisins, it is better to have the fruit low down in order that it may get the heat of the ground and so ripen earlier, but with grapes for wine this is not as important.

At the end of the third year some fruit can be gathered, but one need not expect much of a crop until the vines are four years old. Then, and for the future, they should bear regularly, attaining their full maturity usually at six or seven years.

This time must be qualified somewhat, because it will be found that grapes do not take hold as readily if the land is underlaid with a tenacious clay subsoil as in granitic loam.

During the long years of waiting the vine has many enemies. If the Nysius destructor or false chinch bug is in your soil, they will destroy more vines than a lot of rabbits. A good, healthy jack rabbit will eat off many vines for his supper, and a gopher will pull many a fine cutting down to his dining room.

**CARE OF THE VINE.**—Care and attention only will reward one with a fine setting. As the vines grow old they must be sulphured twice each year, the first time at the date of blooming—May 25th—and again about June 15th, if one wants perfect security against mildew. With sublimed sulphur at less than 3 cents per pound, and ten pounds of it on an acre, one can certainly afford it. With a good sulphuring bellows one man can easily sulphur ten acres a day. It is about the cheapest insurance of a good marketable crop known, and ought never to be omitted, especially on soils where there is a rank growth of the vine.

I think that if the vine grower will put the same work on his vineyard that the orange and lemon grower puts on his grove, he can count on an average crop, one year with another, of two and a half to five tons of grapes per acre, and this without any irrigation or the annoyance of being in an irrigation district. Land that is fit for the vine never needs nor should it have artificial irrigation. [This proposition is rather sweeping. Most of the raisin vineyards and

part of the wine vineyards require irrigation.—Ed.]

**SUGGESTIONS.**—Not every vine grower need be a wine maker. There is now, and doubtless always will be, a market at the railroad depot for all the grapes that can be grown. Men with large capital are waiting for the planting of large areas of vines in order to put in large wineries.

Your land is better adapted to the vine than to any other crop; so, cease trying tree fruit that refuses to respond in profit, or raising hay at a ton to the acre.

My experience is that there is a limit to good grape land. West of a line drawn through San Marcos and Vista the fruit will not secrete sugar enough to meet the demands of the wine makers, who establish prices on the saccharine strength of the juice or must. Nor do they seem to do as well much east of the eastern end of this valley.

Plant only well-tried varieties. The old Mission is a valuable grape, but it fails to bear well on many places. The Zinfandel can be grown on dry hills only, because it has a very compact cluster and has the bad habit of rotting on good valley land.

Plant Muscats for raisins if you wish to run the chances of rain, but plant them all the same, for sweet Muscatel wine well made will bring about the same price in the market as port or angelica; but you will not get so much per ton for your fresh grapes because they have so much pulp, which never makes a wine.

It is doubtless true that some varieties of grapes that I have not tried will do better than those I have had in full bearing for many years, but such as I have bear uniformly good crops of fine fruit. They are the Carignan, Mataro and Grenache—all black—for port wine, and Sauvignon Blanc for angelica. The latter ought not to be planted on rich, deep valley land, but there are hundreds of acres of your rolling hills of deep, red sandy loam, where it will make your heart glad to see the enormous crop of one of the choicest grapes that will be produced.

### Removing Stumps With Dynamite.

Stumps can be removed by using dynamite, which not only throws out the stump, but tears it in pieces small enough to handle, the earth is cleaned off, and the pieces may be cut up and used as firewood. In placing the charge or charges under the stump the operator must study the nature of the soil, size and direction of the roots, and so place the charge that it may present its explosive force against the center of resistance. This can be done by boring under the stump into the soil somewhat deeper than past the center, so that the charge may be under the center of the stump. In all cases put in enough dynamite to do the work thoroughly. Where several holes are loaded, the charges all coming close together under the stump, one primer of a single cartridge will explode all the others. A hardwood tamping rod must always be used to push the cartridges to the bottom of the hole and to ram the hole full of dirt. It will also be found necessary to use more dynamite with pine stumps than with hardwood stumps, and in light than in heavy soils. From two to three pounds of dynamite are usually required to remove a stump. The main object is to use rather more than too little dynamite, and to concentrate the charge as nearly as possible at the point of greatest resistance. The tools required in stump blasting are a wood auger, a dirt auger and a tamping rod. The augers should be from  $\frac{1}{2}$  to 2 $\frac{1}{2}$  inches in diameter, with a shank about 5 feet long.

The best time to do the work is midsummer, when the ground is dry and hard. Place two sticks of dynamite as close under the center of the stump as possible and get the load close to or against the wood, using a  $\frac{1}{2}$ -inch auger with a shank 4 or 5 feet long.

For placing the charge under the stumps, use two 2-inch augers, each equipped with a 5-foot shank, one to bore into the dirt and the other to bore into the stump root. The charge should be placed directly under the middle of the stump, and it will take from one-half to three cartridges, according to the stump. The greatest care should be exercised in handling the caps. The fuse ordinarily used will burn 1 foot per minute and should not be cut less than 2 feet long. That will enable the operator to get twenty rods away. The 40% dynamite is safer than the common black powder, as sparks will not ignite it. When a stump is not entirely blown out, pieces of others can be piled around it and it will burn out readily.

A NEW YORK PAPER says that in that city, located on one of the narrow side streets down town, is a factory in which are made every year more than \$100,000 worth of divining rods for use in finding hidden treasures. From this factory alone are turned out and sold each year almost 5000 fake rods, which means that in the rural districts within 200 or 300 miles of the metropolis are found every twelve months that many gullible and ignorant people. These rods are sold at from \$15 to \$35.

ONE can now talk by telephone from San Diego, Los Angeles, San Francisco, Cal., Portland, Or., Butte, Mont., Denver, Colo., and Salt Lake City, Utah.



## Agricultural Review.

### ALAMEDA.

**RAIN PROVED BENEFICIAL.**—Livermore Herald, Oct. 6: The rains are beginning early this year, and the vineyardists who were caught with half their crops on the vines are convinced they are several weeks too early. The sheepmen, on the other hand, are delighted, as the ranges which were swept by the numerous fires of the summer and fall will now be covered with a luxuriant growth of green feed. Taken as a whole, the valley has probably been benefited as much as it has been harmed by the storm. The rains of the 3rd and 4th aggregated 1.03 inches, which, with the .18 inch which fell in September, makes a total of 1.21 inches for the season. No rain fell last season up to this time.

### COLUSA.

**DAMAGE TO PRUNES.**—Colusa Sun, Oct. 6: There is but little else to be damaged by the rains but prunes, and growers say if it now clears off the damage by the recent rains will not be much, but anything like a continued spell of damp weather would be ruinous. It is estimated that there are at least 6000 trays yet to gather in Moulton's orchard. The average rain for the month of October has been about three-fourths of an inch. There have been eleven years with over 1 inch in October, and in 1889 there was a fall of 6 inches. These are the chances the prune growers have to take.

**COLLEGE CITY RAISINS.**—Colusa Sun, Oct. 6: There is now running at College City a machine that stems and grades the raisins, and they are being packed and made ready for shipment. Thanks be to the combine, they will bring a good price and the neighborhood of the Athens of Sacramento valley will be in funds. There will be some 250 tons of raisins packed there in the next week or so. The machine shows few of the very largest size and few of the smallest. There are four sizes, and next to the largest is the greatest in amount. The raisins are not so large as those of Fresno, but they are sweeter and better. The superintendent said that if the people there could be induced to water their vines they could increase the amount and better the quality. But they do hate water.

### LOS ANGELES.

**A NEW ORANGE.**—A Los Angeles paper reports that A. C. Thompson, a well-known fruit grower of Duarte, has propagated a new and exceptionally choice seedless orange. The new orange is called the Navelencia. It is, as its name implies, a cross between the common Washington Navel and the late Valencia species of the fruit. The new orange, it is believed, will be ready for shipment when the market is at its best, at least so far as prices are concerned. The Navelencia will reach its fullest maturity about June 1st, and it is expected to fill a long felt want in the Eastern market. In shape the orange is not quite as oblong as the Valencia Late, but is fully as large, smoother skinned and has an excellent flavor.

**POMONA FRUIT EXCHANGE.**—Pomona Progress, Oct. 4: The annual stockholders' meeting of the Pomona Fruit Exchange was held Tuesday. The usual reports were received and considered. There are only nine stockholders in this corporation and they are all directors. P. J. Dreher was re-elected secretary and manager. Following is the board: D. C. Teague, president; F. E. Adams, vice-president; S. W. Arbuthnot, treasurer; A. H. Hebbard, J. R. Moles, H. J. Nichols, W. A. Johnstone, C. B. Sumner, Geo. F. Ferris.

**CLAREMONT LEMON ASSOCIATION.**—Pomona Progress, Oct. 4: Another exchange for the exclusive handling of lemons has been formed—the Claremont Lemon Association—and articles of incorporation are already filed and by-laws adopted. The directors are A. T. Currier, Geo. J. Mitchell, J. R. Moles, I. F. Wire and Edwin Squire.

**SAN DIMAS LEMON GROWERS.**—Pomona Times, Oct. 3: The San Dimas lemon growers have organized an association, incorporated and chosen the following for the first board of directors: L. C. Meredith, J. A. Johnstone, C. B. Sumner, E. M. Wheeler, E. J. Fleming. The association has bought land immediately west of the San Dimas Citrus Union packing house for a packing house, which will be built at a cost of \$2000 or more.

**ORANGE GROWERS MAKE MONEY.**—Lemon correspondence Pomona Times: The deciduous fruit crop has been, or is, very short in this part of the valley, but this cannot be said of the citrus fruit, and the general opinion is that orange growers have made lots of money. Visitors to this valley from adjoining sections in days gone by have been prone to such remarks

as the following: "Yes, this is a good valley, fertile soil, raise most anything that can be raised without much water, but water is scarce and always will be and the water system is a poor one. Besides that, you never could raise good oranges here if you had ever so much water." Recent developments in numerous wells show the fallacy of the first objection, and some of our ranchers are proving the second a mistake also, and that there is no fairer orange land in southern California than is found right here in Lemon.

**PASADENA ORANGE GROWERS.**—Pasadena Star, Oct. 2: At the annual meeting of the stockholders of the Orange Growers' Association it was reported that the association received and disbursed \$46,465.49 during the year. Growers received \$27,233 this year, as against \$11,611 in 1899. It was shown that the fruit was packed this year at 2 cents a box less than ever before. The election of a board of directors for the ensuing year resulted in the following being chosen: J. H. Woodworth, M. H. Weight, M. O. Randall, E. L. Farris, Byron Lisk, W. T. Clapp and M. E. Wood.

**THE COMING ORANGE CROP.**—Covina Argus, Oct. 6: A careful inspection of the various groves throughout the valley reveals that although in most cases the trees are not carrying as many oranges as last year, the fruit is much better sized and of higher grade. The tendency this year will be for the fruit to be over-sized. With the new acreage coming into bearing and the large sizes the crop may equal, but certainly not exceed at this point, the output of last season.

### MENDOCINO.

**FRUIT NOTES.**—To the Editor: Mr. Ed Stipp, on good, deep, sandy loam soil, on the first bench up from the river, has nearly fourteen acres in prunes, eight to nine years old. Three years ago he had eleven tons of prunes; last year forty-five tons; this season nearly sixty-five tons; all French prunes, and uniformly the largest I have seen in this county. W. F. Wilcox, of the next ranch, has a fine crop of prunes, Bartlett pears and choice apples—the latter crop of large and fine quality. L. W. Babcock, principal of the High School, has about 2000 Bartlett pear trees that yielded a fine crop this season. He thinks this the best paying fruit in this section, taking one season with another. R. H. Tindall has a beautiful orchard of miscellaneous fruits on the high bench land on the east side of the valley, 3 miles south of Ukiah, overlooking the city of Ukiah and the mountain range for 50 miles to the northwest. He is proving the fact that vegetables and fruit culture pays better than hops, as many others are finding out. Mrs. Tindall is a capable and enthusiastic horticulturist. Wm. Ford and Mr. Halliday, whose ranches join and lie on the east side of the river, have each had good crops of French prunes and hops, but experienced difficulty in getting good help in picking the same.—G. W. INGALLS.

### MERCED.

**BLACK BARLEY.**—Merced Star: A sample of a new grain known as black barley was shown us recently by O. L. Wakefield, who grew the same. From four sacks he harvested thirty-seven sacks of grain and the crop received the benefit of but one rain. In appearance the grain is more like wheat than barley, while the color of it is black, except at the ends. Judging from the texture and taste, it should be a valuable food product, especially for such classes of feeding as a nitrogenous food is required.

### MONTEREY.

**FAILURE OF BEET CROP.**—Gilroy Gazette, Oct. 5: The farmers at the head of the Salinas valley are greatly distressed just now over the fact that they are unable to harvest their sugar beet crop. There are thousands of acres in the vicinity of Pajaro, Castroville and Salinas which the farmers are unable to bring into market owing to the fact that the contractors to make and market this year's crop have left without finishing their job. Many Japs are among the contractors, who, seeing that they were going to realize almost nothing out of the crop, put on their hats and walked away, leaving the farmers to whistle. There is not half a crop, but the owners are anxious to harvest what they have, which in many instances they are unable to do. The great beet sugar factory at Salinas belonging to Spreckels has started up, but they are not receiving nearly enough beets to tax it to its fullest capacity.

**BIG BELLFLEURS.**—Salinas Index, Oct. 4: F. J. Frese exhibited at the Index office yesterday two Bellfleur apples which he got from the orchard of C. S. Swenson, near Prunedale. They were 13 inches in circumference and weighed 18½ ounces each. They were sound and without a blemish. Just think of it—apples weighing considerably more than a pound apiece!

### RIVERSIDE.

**PROSPEROUS CITRUS FRUIT ASSOCIATION.**—Riverside Press and Horticulturist, Oct. 5: The Riverside Heights No. 10 Fruit Association met in annual session on Tuesday, and the report showed that altogether 567 carloads, or 205,110 boxes of oranges had been shipped during the year, and this fruit brought a total of \$311,147.34. It netted the growers \$234,242.20. The total expenses were \$56,605.14, and the average cost per box for packing was 27½ cents. In round numbers, the association paid out \$250,000 for freight during the year. The per cent of culls was exceptionally small, being 1½% for Navels, 62½% of the Navels being "fancy." Riverside Heights No. 10 is the largest association in the Southern California Fruit Exchange, having 180 orange growers enrolled and controlling the output of 200 orchards. It pays out more to growers and has a larger payroll than any other association. Its packing house is one of the largest in southern California, having a floor space of 15,625 feet, exclusive of platforms. There are sixty-five names on its payroll. The equipment of the packing house includes all labor saving machinery and devices. The stockholders re-elected all the former board of directors except J. J. Hewitt, deceased; Dr. J. G. Baird was chosen in his stead. The directors elected officers as follows: President, G. W. Garcelon; vice-president, H. W. Leighton; secretary and manager, W. P. Russell; bookkeeper, Carl Derby; foreman, J. E. Copeland; board of control, G. W. Garcelon, H. W. Leighton and J. E. Cutter; directors from association to Fruit Exchange, G. W. Garcelon, W. P. Russell and J. E. Cutter; representative on Fruit Exchange, H. W. Leighton.

### SAN BENITO.

**BEET RAISING A FAILURE.**—San Benito Advance: It is proposed to sow rye grass on a large area of the alkali lands of the Tequesquito ranch, and commence dairying on a large scale. So far as experimented on, the alkali lands are not a success as beet land.

**HORSEFLESH HIGH.**—San Benito Advance: The rise in the price of horses is phenomenal. At a recent auction sale in Hollister \$285 was bid and declined for a span of work animals. Two-year-olds and yearlings averaged \$85 per head. Horses purchased at the Hardin sale a year ago brought double the price paid then.

**HOLLISTER CREAMERY.**—Hollister Bee, Oct. 3: At the butter exhibit at the State Fair at Sacramento this year the Hollister Creamery received sixth prize in the competition for fresh tub butter. There were about fifty creameries from the different parts of the State in the contest. The five creameries that stood higher than the Hollister Creamery scored only a few points above the local creamery. In the cold storage butter contest the Hollister Creamery received first prize, scoring several points higher than its closest competitor. The butter from the Hollister Creamery compares favorably with the butter from any of the creameries in the State and finds a ready sale in the San Francisco market and elsewhere.

### SAN BERNARDINO.

**FRUIT EXCHANGE ELECTION.**—Sun: At the annual meeting of stockholders of the San Bernardino County Fruit Exchange the following were elected directors: Jas. Barnhill, G. A. Brua, A. L. Drew, W. S. Bullis, G. N. Turner, S. H. Barrett and E. F. Van Leuven. The officers elected were: Jas. Barnhill, president; S. H. Barrett, vice-president; E. F. Van Leuven, secretary; First National Bank of Colton, treasurer. The report of the secretary shows a total of 147,080 boxes of oranges and lemons shipped, averaging \$1.61 per box f. o. b. Receipts were \$238,000. The total number of cars shipped was 406, being an increase of over 100% more than last season, and the probability is that the coming season's shipments of this exchange will reach 600 cars.

**PLANTING EUCALYPTI.**—Chino Valley Champion: The Chino Land & Water Co. plans to plant many thousands of eucalyptus trees on the Chino ranch to the east and northeast of Chino. The details of the planting have not yet been made public, but it is expected that some lands not adapted to general cultivation will be planted to groves, while in other parts the roads will be aligned with rows of trees. This is a wise movement. Had it been taken years ago those lands would have had a greatly increased value. The wood of itself is a valuable crop and the windbreaks made by the trees will not only make the lands more valuable for farming, but more desirable for residence.

### SAN JOAQUIN.

**TRYING TO CHANGE THREE MILES OF A RIVER.**—Stockton Mail: J. Aldridge of New Hope, a farmer who has suffered from flood waters, declares that he will change the course of the Mokelumne

river for a distance of about three miles by straightening bends. The scheme is nothing less than to change the entire river bed and conduct that stream through an artificial channel, doing away with broken levees and flooded farms in the New Hope district during the high water of winter and spring. Three miles of crooked river bed will be cut to less than a single mile of straight channel. Work on the new channel has already commenced. It means a large outlay of capital, as much of the ground traversed is densely covered with trees and underbrush.

### SANTA BARBARA.

**A PROFITABLE INDUSTRY.**—Lompoc Record: It is estimated that 100 tons of apples will be sold to local fruit peddlers this season. Santa Barbara, and even Ventura, is sending in for our choice wormless apples. This trade heretofore, which has been large, has not been taken into account when making up the output of our orchards, and when added to the pack going out by rail makes quite a pretentious showing for this young but growing industry. It will not be more than a year or two before the output of winter apples will reach 100 carloads, or more than 80,000 boxes.

### SANTA CLARA.

**EFFECTS OF DROUTH.**—The Santa Clara Journal predicts that the orchard men will find more damaged trees due to dry weather next spring than they have found at any other time since the beginning of our three years of short rainfall. Many of the trees appear to feel the effect of a scant water supply, as one may note by the number of dead and apparently dying prune trees in the orchards in the various parts of the Santa Clara valley. This is more noticeable where there is an absence of cultivation. Highly cultivated orchards, where the cultivating was deep, are suffering very little.

### SONOMA.

**RAINING DOLLARS.**—Petaluma Argus, Oct. 6: The rain is pouring down dollars and cents for southern Sonoma. Enough water has fallen to permit plows to get to work, and there will be a lot of early crops in and around Petaluma. The downfall will give the grass a fine start, help out the streams and other water supplies and lay the dust. Petaluma is not sorry for the rain, but regrets that the more northern grape growers will lose a portion of their earned harvest.

**SOME DAMAGE TO GRAPES.**—Santa Rosa Press-Democrat, Oct. 6: The vineyardists will suffer considerable loss as the result of the heavy rain upon the unpicked grapes. It is estimated that there are several hundred tons of grapes that were seriously damaged. The late varieties, such as the Mission, it is not thought will be much hurt. At any rate, there will be a good deal more brandy made than there would have been had the rain held off until after the picking season was over.

### SOLANO.

**DECREASE IN FRUIT RETURNS.**—Vacaville Reporter, Oct. 6: Up to the present time the returns from fruit shipped East do not indicate as profitable a season as 1899. At this period last year there had been received through the Bank of Vacaville over \$700,000. This year at the same time the figures run much below that, only aggregating \$600,000. The difference is probably traceable to the fact that the past season has been most unsatisfactory in the matter of time made to Eastern markets. Of course there were other causes, but the future of the shipping of green fruit to the East is dependent on an expedited service.

### VENTURA.

**BEANS GOOD AS GOLD.**—Hueneme Herald: Farmers are hauling to the warehouses what is just as good as gold this season, namely, Lima beans. As one farmer remarked, "They are too valuable to leave lying around loose." The market price is quoted here at \$4.80 per cental. M. L. Wolff estimates the yield at 200,000 sacks. Large quantities of seed barley and wheat are being hauled out of town by Conejo farmers, which will be planted as early as possible.

## Horse Owners! Use

GOMBAULT'S

## Caustic Balsam

A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland O.





## THE HOME CIRCLE.

### The Housewife's Part.

Oh, men, and oh, brothers, and all of you others,  
I beg of you pause and listen a bit,  
And I'll tell you, without altering any of it,  
The tale of the housewife's part.

Mixing and fixing,  
Brewing and stewing,  
Basting and tasting,  
Lifting and sifting,  
Stoning and boning,  
Toasting and roasting,  
Kneading and seeding,  
Straining and draining,  
Poking and soaking,  
Choosing and using,  
Reasoning and seasoning,  
Paring and sharing—  
This is the housewife's part.

Filling and spilling,  
Pounding and sounding,  
Creaming and steaming,  
Skimming and trimming,  
Mopping and chopping,  
Coring and pouring,  
Shelling and smelling,  
Grinding and minding,  
Firing and tiring,  
Carving and serving—  
This is the housewife's part.

Oiling and boiling and broiling,  
Buying and trying and frying,  
Burning and turning and churning,  
Pricing and icing and slicing,  
Hashing and mashing and splashing,  
Scanning and planning and canning,  
Greasing and squeezing and freezing—  
This is the housewife's part.

Aching and baking and making and shak-  
ing,  
Beating and heating and seating and treat-  
ing,  
Oh, men, and oh, brothers, and all of you  
others—  
Do you envy the housewife's part?  
—Susie M. Best.

### The Linotype Lady.

The Honorable William Jarvis, State Senator and candidate for Governor, was calling on his betrothed, Miss Laura Jackson. The Honorable William was generally alluded to as a "rising young man" and the future Mrs. Jarvis as a "sensible girl." The match, therefore, was adjudged "very suitable." The two parties most concerned gave little thought to its suitability, but were very sure that it had been made in heaven and they themselves thereby absolved from all responsibility for it.

But because Miss Jackson was a sensible girl she was interested in the Honorable William as a statesman as well as lover. Therefore she was not content with the brief answer, "business," which he made to her inquiry as to why on this particular evening he was rather absent-minded and less joyously happy than usual. It was not in her nature to be denied any information which she earnestly wished to possess, and so, before long, she had learned just what was worrying her future lord but present vassal.

The leading newspaper in the northern part of the State, it appeared, being independent in politics, had so far refused to commit itself to any gubernatorial candidate. This greatly disappointed Jarvis, who had confidently expected its support. In fact, he was afraid that if his opponent was endorsed by the Webster Whig his own chances for victory would be perceptibly lessened; while on the other hand, if the Whig would place the name of William Jarvis at the head of its editorial columns he did not see how he could be defeated.

All this having been dutifully explained to Miss Laura, she wrinkled her forehead charmingly for perhaps three minutes, and then announced with calm decision that she had solved the problem.

"And, now, Will," she said, "if I get the Whig to come out for you what reward of merit do I get?"

"I will marry you a month sooner than we had planned," promised Jarvis with remarkable readiness.

"Impudence! Did you ever hear,

'Married in haste, repent at leisure?' But seriously now, will you make one appointment just as I wish it made, assuming, of course, that the person is entirely competent?"

"Why, yes," assented Jarvis, somewhat slowly. "I don't approve of ante-election pledges as a general thing, but I think I am justified in making an exception in this case. Let's officially seal the agreement."

Which they did most satisfactorily.

A few days latter the editor and manager of the Webster Whig were engaged in anxious consultation.

"It's no use," the latter was saying, "I've telegraphed everywhere I can think of and there does not seem to be a linotype operator out of work from one end of the country to the other. We'll have to rig up some frames and get three or four of the old hand compositors back."

"But that will make the paper look like the dickens," objected young Willis, the editor, and it will increase expenses, too."

"Sure," assented the manager; "but what else can we do? You tell."

Just in time to save Willis from the necessity of confessing his incapacity there came a knock at the door.

"Come in," called the manager without turning his head.

But Willis was facing the door, and as it opened to admit a very pretty girl the celerity with which he removed his feet from the table impelled his partner to do likewise.

"Excuse me," began the visitor, "but I understand that you wish to hire a linotype operator."

"We do," chorused the two men.

"And so I have come to ask for the place," continued the young lady. "I have not had much experience but I can average thirty-five hundred an hour, and they tell me that my proofs are remarkably clean."

The editor kicked the manager under the table and the latter replied without hesitation:

"We'll take you on trial anyway. I don't mind telling you that you have come in the nick of time. We do need an operator and badly. How soon can you begin work?"

"This minute," replied the girl promptly.

"Very well," said the manager, and, with a few instructions, bowed her out. "She'll do," he remarked to his partner as he resumed his seat and elevated his feet once more.

"Gee! I should think she would!" asserted Willis more forcibly than elegantly.

The new hand did not fail to equal the expectations of her employers. She was quietly courteous to those in the office, men and girls alike, but she "minded her own business," as the foreman put it, and, perhaps for that reason, was more efficient than the average of the operators.

The office boy, an irreverent youth who alluded to Willis as "Bilius" and to his partner as "the old man," expressed the general feeling as to the new girl when he said to the editor one day:

"The linotype lady wants to know if this is right."

"The what?" ejaculated Willis in amazement.

"The linotype lady. That's what she is. I know 'em when I see one and she's the real article."

So she was christened, and the name stuck, to the envy of the other girls.

About a week after this addition to the force Willis opened the Whig one evening, and glanced first, as was his custom, at the editorial page. For perhaps half a minute he stared in blank amazement. Then he dropped the paper and executed a war dance. In response to his frantic calls the manager hastened into the inner editorial sanctum and calmly inquired what was the matter.

"Has the foreman dropped out another line in the make-up or did your typewriter go off its feet and make a mistake for which you wish to blame the proofreader? What ails you anyway?"

"Have you looked at the editorial page?" asked Willis.

"Why, no, what's wrong with it?"

"Did you write or cause to be written that Jarvis editorial?"

"What Jarvis editorial? I wrote none and know nothing about any. I thought we were to be neutral in that fight."

"That was the way I understood it," said Willis, more puzzled now than angry, "but there is the strongest kind of an editorial in to-night's Whig advocating the election of Jarvis. If you don't know anything about it and I don't know anything about it who does know about it? And what are we going to do about it?"

"First, let's find out who does know about it," very practically suggested the manager. "What does the proofreader say?"

But the proofreader had never seen the editorial until they showed it to her. She was positive that she had not read the proof of it, and the copy holder supported her by affirming that no copy for it had passed through her hands.

When the foreman who made up the paper was questioned he did remember placing the type in the forms and reading the headline, but that was as far as his information went. And the assistant foreman, who gave out the copy, made the mystery deeper than ever by asserting that no such editorial matter had been handled by him. The "devil," who took the proofs, was equally certain that he had nothing to do with that particular lot of type.

The linotype operators were next in order for questioning, and among them Willis expected to find the solution of the puzzle, for it was only too evident that the troublesome editorial had been put in type by somebody. But one after another of the operators denied all knowledge of the matter until the entire roll had been called without the faintest glimmering of light. Willis noticed that when he approached the linotype lady she was very pale and apparently disturbed, but when he asked, "Did you see the copy for this editorial, Miss?" she answered so promptly: "No, sir," and met his gaze so unflinchingly that he had not the heart to doubt her.

All investigation having thus proved fruitless, the editor and the manager shut themselves in again for further discussion.

"The next question is," said Willis, "What shall we do about it?"

"It looks to me," replied the manager, "as if we ought to make the best of it and adopt Jarvis as our candidate."

"But that is probably just what the person wants who put up this job on us," objected Willis.

"Precisely," assented the manager; "but what other course is open to us?"

If, without explanation, we oppose Jarvis, we shall be called turncoats, weather vanes and other choice names. If, on the other hand, we tell just what has happened and give it as our reason for opposing Jarvis, who will believe us? No one. Like a great deal of truth, it is absurdly improbable. Now you and I know that Jarvis is not a bad fellow, and that he will make a pretty good Governor. He differs from us on some points, I know, but perhaps we can bring him around to our way of thinking after a while. He is one of those men whom it is easier to lead than to drive, anyway. Now what do you say?"

Willis did not fancy the idea at all, but the longer he pondered the further away he found himself from any other way out of the difficulty. So he yielded gracefully, and from that moment until the end of the campaign wrote vigorously and well in Jarvis' support.

More than once in that time the linotype lady, with a piece of editorial copy before her, stopped to read it over a second and a third time. And any one who had happened to be watching her would have wondered at the smile of mingled triumph, coquetry and happiness that lit up her face on those occasions.

Before long, however, the linotype lady resigned her place. The supply of operators had become once more equal to the demand, and as soon as she learned the fact she prepared to

bid the Whig goodbye. The foreman, the manager and the editor, all protested, and even the other operators, in spite of their occasional jealousy, were sorry to lose her. The linotype lady said that she was sorry to go, which was true, but that she had an opportunity to engage in a line of work which she liked even better, and that was also true.

As said line of work was the preparation of an elaborate and beautiful trousseau for her own use, any woman can understand how even the sensible Miss Jackson could find no employment in the world more to her taste.

"How did you do it?" asked Jarvis on the first opportunity, referring to the Whig, which he held in his hand, and which at the head of its editorial page announced in bold type: "For Governor, William Jarvis."

Having secured his solemn promise "never to tell," his betrothed satisfied his curiosity.

"You remember that first editorial in your favor?" she asked. "No one knew or could find out how it got into the paper, but since it was there and in the whole edition, the editor and the manager decided that it was best to stick it out and advocate your election to the best of their ability. As you know, that is what they are doing, and I call it very nice of them."

"How did that first editorial get in? Well, I'll tell you that, too. One noon I waited in the dressing room until every one was gone, and then slipped back to my machine. My thoughts were and had been so full of you and your candidacy that it took but a few minutes for me to put that editorial in type even without copy."

"You mean that you made it up as you set it?" queried Jarvis with admiration.

"Just that. When it was done I took a proof, glanced through it hastily, made a few corrections, and put the type on the 'bank' with some other editorial matter. The foreman was in a hurry when he came to make it up and merely glanced at the heading. Seeing that it was double headed he placed it very rightly, as the leader."

"I was a good deal seared while the mysterious editorial was being investigated, for I really did not want to tell a downright lie. But Mr. Willis was kind enough to put his inquiry in such a way that I could answer it in the negative without the slightest strain on my conscience."

"And now, when you are elected, as of course you will be, you must not forget your promise about letting me make an appointment."

"It shall be my first official duty,"

## BABY PULL-BACKS

It is strange that babies get on so well as they do; there are so many pull-backs! But Scott's emulsion of cod-liver oil is a wonderful help.

Begin with a little. Too much will upset the stomach. Increase, but keep under the limit. The limit is upsetting the stomach.

It rests a tired digestion; it does not tax the stomach at all; it lets it play—little stomachs like to play.

We'll send you a little to try, if you like.  
SCOTT & BOWNE, 409 Pearl street, New York



assented Jarvis, "but may I know who is to be appointed to what?"

"Will you promise to keep this a secret, also? Well, then, I want you to appoint Willis State Printer. The place is worth about five thousand dollars a year, isn't it? He was good to me, you see; in fact, they all were, but he especially. Of course he knows nothing about this plan. I wish to surprise him as much as I did you, and him, too, with that editorial. May I?"

Jarvis said "yes" very readily, being considerably relieved to find that the appointment which he had promised was to be thus worthily bestowed.

And so, when it was Governor Jarvis by twenty thousand plurality, one of the first acts of the new chief executive was to invite Willis to call upon him. The young editor, somewhat surprised at the message, made the trip as requested, and his surprise was increased when the governor told him that he had been selected for the place of State Printer.

"I wish to say," explained Willis after a moment's thought, "that if your choice is based on the Whig's position during the campaign, you are making a mistake. For the paper's support you are not indebted to me."

"Indeed," exclaimed Jarvis. To whom then?"

"That I do not know," confessed Willis, and went on to tell the story which the governor had heard before.

"That is a very curious and interesting incident," said the latter gravely, but with a twinkle in his eye. "The position of your paper, however, had little to do with my choice of you to be public printer. That was mainly brought about through the influence of a lady."

"A lady!" ejaculated Willis. "Impossible! I have no woman friend who can have influence with you, and if I had I could not accept a position secured in such a way."

"Wait!" commanded Jarvis. "You are altogether too hasty in your statements and your conclusions. It may help to solve your difficulties if I make you acquainted with my wife."

With somewhat suspicious timeliness the door opened, and a very smiling young woman entered.

"Mrs. Jarvis," said the governor, "may I make you acquainted with my friend, Mr. Willis? Perhaps however, he already knows you as—"

"The linotype lady," said Willis and Mrs. Jarvis in chorus.—Waverley Magazine.

#### Loyal to His Mother.

The late Dr. John Hall told of a poor woman who had sent her boy to school and college. When he was to graduate he wrote to his mother to come, but she sent back word that she could not, because her only skirt had already been turned once. She was so shabby she was afraid he would be ashamed of her.

He wrote back that he didn't care anything about how she went. He met her at the station and took her to a nice place to stay. The day arrived for his graduation, and he came down the broad aisle with that poor mother, dressed very shabbily, and put her into one of the best seats in the house.

To her great surprise he was the valedictorian of his class, and carried everything before him. He won a prize, and when it was given him he went down before the whole audience and kissed his mother and said: "Here, mother, is the prize. It is yours. I would not have had it if it had not been for you."—Standard.

"It's a queer worl'," said the old man, "when you come to think it over. You know, I eddicated Jim fer a lawyer."

"Yes."

"An' Bill fer a preacher?"

"Exactly."

"An' Tom fer one o' those here literary fellers?"

"I've heard so."

"An' Dick fer a doctor?"

"Yes."

"Well, now, what do you reckon I'm a-doin' of?"

"Can't say."

"Well, sir, you mout not believe it,

but I'm a-supportin' of Jim an' Bill, an' Tom, an' Dick, an' it keeps me a-goin' from daylight to dark!"—Atlanta Constitution.

#### One's Will.

One day a little wave—indeed, he wasn't naughty,

Though the others tried to hush and keep him still—

Said: "You musn't think, my comrades, that I am quarrelsome or haughty, But I want to be a rainbow, and I will!"

So the sun came shining gladly, and the wind came blowing madly, And the little wave leaped up to catch the light;

And for half a glorious minute, with only sunshine in it, He flashed in seven colors on the sight.

So when behind your task the harder ones come trooping,

While the senses only peace and pleasure crave,

And o'er the humdrum work your heavy head is drooping—

Just think you of that rainbow and that wave.

—Harriet Prescott Spofford, in October St. Nicholas.

#### New Field for Women.

The question of what we shall do with our girls is growing yearly more pressing. The main channel, the matrimonial mart, has long been glutted. The governess and general companion business is equally overdone. The fancy and artistic trade is suffering from chronic overproduction. The more promising outlets of typewriting, shorthand and journalism have taken a goodly number of hands off the market. But the cry is still they come. Many people will tell you that the only avenue for women workers which is still uncrowded is that of domestic service. But for several reasons it is scarcely a livelihood that can be cordially recommended to ladies, as the very qualified success of that unhappy hybrid the lady-help shows. There is still, however, a neglected profession which in many ways has a great deal to recommend it, at least to all who find satisfaction—and they are many—in doing something for humanity and the State; we mean the profession of cottage mother.

Why should the profession of mother to the orphan children of the State seem any whit inferior to that of a hospital nurse, which attracts some of the best of our womankind? The pay is certainly quite as good. The responsibilities and services rendered are far more important. The function of the nurse begins and ends with the restoration to health of the patient who seeks her care. The cottage mother has not only to look after the health of motherless little ones confided to her; she has also the far more arduous and important task of molding their character, of training them up to take one day the place in society, of which the sins or shortcomings of their family had deprived them. Unfortunately, the majority of cottage mothers, though very worthy individuals, cannot in any way be compared in personal qualities or professional skill with the average woman who has taken up nursing. They are generally not wanting in motherliness. But that is not the conclusion of the whole matter. A great deal more is requisite in bringing up children, otherwise we must take as our ideal that motherly old woman who, indignant at her capacity for bringing up children being impugned, retorted: "What! I don't know how to bring up children? Why, I've buried ten?"—Chicago Evening Post.

"Poor fellow!" she said. "He proposed, but I had to refuse him." "Ah!" exclaimed her dearest friend. "Then that explains it." "Explains what?" "Brother Tom said the men at the club were all congratulating him on something or other last night."

"Which way do the stairs run in the defendant's house?" asked the smart lawyer. "That," replied the witness, "depends entirely on one's point of view. One way they run up and the other way they run down."

#### The Right Way.

Our God is love, and that which we miscall

Evil, in this world that He has made, Is meant to be a little tender shade Between us and His glory—that is all; And he who loves best his fellow-man Is loving God the holiest way he can.

—Alice Cary.

#### Canticle of the Road.

A draught of water from the spring, An apple from the wayside tree, A bit of bread for strengthening, A pipe for grace and policy. And so, by taking time, to find A world that's manly to one's mind; Some health, some wit in friends a few, Some high behaviors in their kind, Some dispositions to be true.

—Arthur Colton.

#### A Trick for Hallowe'en.

A game that is not entirely new, and yet especially appropriate for Hallowe'en, is known as "clairvoyance." It is especially enjoyable for an evening of mystery, because it always proves mystifying to the uninitiated. Take some particular person who understands the game to play the role of medium, send her from the room, an empty chair being reserved for her next to the person who is in collusion with her. When she leaves the room some word is determined upon by the rest of the party—for instance, "horse"—and, when the medium returns, her task is to tell what the word is without any questions. She is summoned, sits down next to her friend, and, while all present are seated in a circle, with joined hands, the one who was in the room (and hence knows the word) spells it to the medium by tapping with a finger upon the palm of her hand, the number of taps being equal to the number of letters in the alphabet—for instance, eight taps for H, then quite a pause; fifteen taps for O, etc. When the medium announces the word successfully, those not knowing the secret cannot understand it at all, and it is even more mystifying when it is explained that it is based upon some peculiar mental action.

#### DOMESTIC ECONOMY.

##### Sweetbreads.

Sweetbreads are considered great delicacies, probably owing to the supply being so limited, there being but one pair in each calf—a small portion when compared with the other edible parts of the animal. When the demand for them is great the price is very high—much in excess of the food value. But as not all people care for them, they are often sold in some localities where there is little call for them for a mere trifle. They have a delicate flavor and a soft, peculiar texture which a person engaged in manual labor and possessing a hearty appetite may not find very satisfying. They are better adapted to delicate people who require a small amount of nourishment at one time and at shorter intervals. Sweetbreads spoil very quickly and should never be bought unless absolutely fresh. The color should be clear and a shade darker than the fat. When they are sent in from the market remove the pipes and loose membranes at once and soak them in cold water to remove the blood. They should then be drained and plunged into boiling water to which a teaspoonful of salt and a tablespoonful of lemon juice have been added, and cooked for ten or fifteen minutes. Then they should be placed in quite cold water again. When drained again and dried they may be set away ready for use. These processes will blanch and harden them, and the parboiling insures their keeping in perfect condition.

If boiled twenty minutes they may be sliced and served on lettuce as a salad with dressing. The most common ways of cooking is to cut them in halves and saute lightly in hot butter, or to cover with egg and crumbs and fry in deep fat, or to simmer until tender in a white sauce. Any of these methods makes a

dainty dish. They are also often served with green peas by stewing until tender, then browning slightly with a little flour and butter in a dripping pan. Make a gravy by adding a little water in which the sweetbreads were stewed, and seasoning, and then a half pint of cream. If the sweetbreads are placed in the center of a dish, the boiled and seasoned peas placed around them and the gravy poured over both, they will be very inviting.—Central Advocate.

#### Hints to Housekeepers.

Cucumber juice, chickweed extract and tansy are all good for removing blemishes and inducing freshness of the skin. Express the juice of cucumbers well grown, and apply freely. Chickweed pressed through a sieve can be diluted with soft water. The old-fashioned fresh tansy infused in buttermilk is also most excellent.

A cleaning fluid that will remove grease from the most delicate silks and cloths is made of one pint of distilled benzine, three-sixteenths of an ounce of fluid chloroform, one-eighth ounce of carbonate of ammonia, one-eighth ounce of sulphuric ether. It should be bottled and corked tightly and kept from fire and lights, as it is very inflammable.

An excellent recipe for oil pickles is furnished by an old housekeeper: Pare and slice fifty medium-sized cucumbers, sprinkle them with salt and allow them to remain over night. In the morning drain and put them in a stone jar, and pour over them a dressing made of one cup of olive oil, a half cupful of white mustard seed, a half cupful of black mustard seed, one tablespoonful of celery seed and one quart of cold cider vinegar.

If whipped cream is added to chocolate, it should be put in the bottom of the cup and the chocolate poured over it. A cup of cocoa is as much improved by the cream as the chocolate. Eight of these beverages, provided a good quality is procured, is better for the morning drink of a nervous man or woman than tea or coffee. Pure chocolate is not apt to thicken in the boiling, flour or starch being a common adulterant of the interior brands.

Books kept either in open or closed cases must be thoroughly dusted, with the shelves also, if the house is closed, and the cases covered with muslin. Those having fine bindings should each be wrapped in paper. Marble figures and plaster of Paris statuettes should first be cleaned, then covered tight with paper or cloth. To cleanse them make a thick paste of whiting and water, brush over into every crevice, and when dry rub it off with a brush.

#### Washing Colored Calicoes.

Colored calicoes should be washed in warm, not hot water. Blues and greens are strengthened by the use of vinegar in the rinsing or bluing water, allowing one teaspoonful of vinegar to a quart of water. With the other calicoes or cambrics salt may be used to set the color. Miss Parloa declares that the ideal way to treat delicate colors, dark sateens or mourning goods is not to use soap at all, but the following starch mixture, which cleanses and stiffens at the same time: For two dresses make one gallon of starch by mixing one cupful of flour with one pint of cold water. Stir until the lumps are dissolved and pour over it three and one-half quarts of boiling water. Cook until clear and smooth, then strain through cheesecloth. Pour half the mixture in a tub containing four gallons of warm water. Wash one of the dresses in this, rubbing the fabric the same as if soap were used. Rinsc in two clear waters and hang out to dry, when they will be found to be about as stiff as when new. Sprinkle only an hour or so before ironing. Calicoes should all be ironed on the wrong side.

"You contend that oleomargarine is just as good as butter, don't you?" "It's better," answered the dealer, without hesitation. "It pays several times the profit."—Washington Star.



# S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Oct. 10, 1900.

### CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Nov.	Dec.
Wednesday.....	76 1/2 @ 77 1/2	77 1/2 @ 78 1/2
Thursday.....	77 1/2 @ 78 1/2	78 1/2 @ 79 1/2
Friday.....	77 1/2 @ 78 1/2	78 1/2 @ 79 1/2
Saturday.....	78 1/2 @ 79 1/2	79 1/2 @ 80 1/2
Monday.....	76 1/2 @ 77 1/2	77 1/2 @ 78 1/2
Tuesday.....	77 1/2 @ 78 1/2	78 1/2 @ 79 1/2

### LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool was as follows for the week:

	Dec.	Feb.
Wednesday.....	6s 3 1/2d	6s 4 1/2d
Thursday.....	6s 4 1/2d	6s 5 1/2d
Friday.....	6s 3 1/2d	6s 4 1/2d
Saturday.....	6s 4 1/2d	6s 5 1/2d
Monday.....	6s 3 1/2d	6s 4 1/2d
Tuesday.....	6s 3 1/2d	6s 4 1/2d

### SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec., 1900.	May, 1901.
Thursday.....	1 04 1/2 @ 1 05 1/2	1 12 @ 1 12 1/2
Friday.....	1 04 1/2 @ 1 05 1/2	1 12 1/2 @ 1 13 1/2
Saturday.....	1 04 1/2 @ 1 05 1/2	1 11 1/2 @ 1 12 1/2
Monday.....	1 03 1/2 @ 1 04 1/2	1 10 1/2 @ 1 11 1/2
Tuesday.....	1 03 1/2 @ 1 04 1/2	1 09 1/2 @ 1 10 1/2
Wednesday.....	1 02 1/2 @ 1 03 1/2	1 08 1/2 @ 1 09 1/2

### WHEAT.

No changes of importance have been developed in quotable values or the general condition of the wheat market since last review. Spot values were fairly steady, but options declined. There is a slightly better outlook locally, and for this the producer and wheat holder should probably be grateful, on the principle of small favors thankfully received, larger ones in proportion. The rough handling which has been given the wheat grower for some years past in the markets of the world have certainly tended to make him appreciate the most infinitesimal benefits, much like the old lady who thanked the Lord that the two teeth which had been spared to her were opposite each other. The silver lining to the cloud over the wheat market is in the shape of prospectively easier freight rates to Europe. One Government transport was recently released, and there is probability of other vessels now employed in carrying army and navy supplies being soon turned back to the merchant marine to carry grain and merchandise. Under most favorable circumstances, however, it will be some time before there will be any special accumulation of vessels or any pronounced break in ocean freight rates. It is encouraging, nevertheless, to have freight rates tending downward. The latest estimate of the world's wheat crop for 1900 is as follows: North America, 560,000,000 bushels; South America, 121,000,000; Europe, 1,445,000,000; Asia, 360,000,000; Africa, 44,000,000; Australasia, 57,000,000; total, 2,587,000,000 bushels. Decrease this year, 138,000,000 bushels.

### CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, \$1.05 1/2 @ 1.02 1/2.
May, 1901, delivery, \$1.12 1/2 @ 1.08 1/2.
Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at \$1.02 1/2 @ 1.02 1/2; May, 1901, \$1.09 1/2 @ 1.08 1/2.
California Milling..... \$1 05 @ 1 08 1/2
Cal. No. 1 shipping, alongside..... 1 02 1/2 @ 1 03 1/2
Oregon Valley..... 1 03 1/2 @ 1 05 1/2
Washington Blue Stem..... 1 02 1/2 @ 1 07 1/2
Washington Club..... 1 00 @ 1 05
Off qualities wheat..... 97 1/2 @ 1 00

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-1900.	1900-01.
Liv. quotations.....	6s 3 1/2d @ 6s 4d	6s 4 1/2d @ 6s 7d
Freight rates.....	35 1/2 @ —	42 1/2 @ —
Local market.....	\$1 07 1/2 @ 1 10	\$1 01 1/2 @ 1 03 1/2

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

### FLOUR.

There is no very active movement in flour, either outward or on local account. Most sales of noteworthy proportions recently effected have been at concessions to buyers from full current rates. Stocks are more than ample for all probable requirements of the immediate future. Prospects are not bright for the market soon developing any special strength.

Superfine, lower grades.....	\$2 25 @ 2 50
Superfine, good to choice.....	2 60 @ 2 80
Country grades, extras.....	3 15 @ 3 40
Choice and extra choice.....	3 40 @ 3 65
Fancy brands, jobbing.....	3 60 @ 3 75
Oregon, Bakers' extra.....	2 90 @ 3 25
Washington, Bakers' extra.....	2 90 @ 3 40

### BARLEY.

While values have been tolerably well maintained, business in this cereal has not been brisk. Feed descriptions constitute the bulk of present offerings, and this is likely to be the case throughout the balance of the season. Chevalier is practically out of stock. The high grade Brewing Barley remaining is being as a rule rather firmly held, in most instances above the views of buyers. In the speculative market business dragged most of the week and fluctuations kept within narrow bounds, but touched lower levels than last quoted. A part cargo of 51,102 centals Chevalier Barley, valued at \$61,300, was cleared for Belgium.

Feed, No. 1 to choice.....	72 1/2 @ 75
Feed, fair to good.....	65 @ 70
Brewing, No. 1 to choice.....	80 @ 85
Chevalier, No. 1 to choice.....	97 1/2 @ 1 02 1/2
Chevalier, No. 2.....	85 @ 90
Chevalier, poor.....	70 @ 75

### OATS.

There were heavier arrivals of this cereal than for some weeks preceding, the main increase being from Washington, one steamer bringing over 12,000 sacks from the Sound. Most of these Oats came to owners, however, instead of being on consignment, and values were not materially disturbed. Prices were best sustained for choice to select qualities, although common grades were by no means neglected.

White Oats, fancy feed.....	1 35 @ 1 40
White, good to choice.....	1 25 @ 1 30
White, poor to fair.....	1 15 @ 1 22 1/2
Gray, common to choice.....	1 20 @ 1 27 1/2
Milling.....	1 32 1/2 @ 1 40
Surprise, good to choice.....	1 35 @ 1 45
Black Russian.....	1 10 @ 1 25
Red.....	1 12 1/2 @ 1 30

### CORN.

Domestic product is in very limited stock and gives promise of remaining so throughout the season. Small quantities of Eastern Corn are arriving, most of the same having been previously placed by sample. Market is firm.

Large White, good to choice.....	1 22 1/2 @ 1 25
Large Yellow.....	1 20 @ 1 22 1/2
Small Yellow.....	1 50 @ —
Eastern, in bulk (carload lots).....	1 15 @ 1 17 1/2

### RYE.

A shipment of 1100 tons went forward for Belgium. Values are fairly steady, owing more to lack of selling pressure than to very active inquiry.

Good to choice, new.....	87 1/2 @ 90
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### BUCKWHEAT.

Market is very scantily supplied. Choico could be readily placed to advantage.

Good to choice.....	1 85 @ 2 10
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### BEANS.

Buyers are holding back as much as possible, anticipating lower prices. That their most sanguine expectations in this regard will be realized is by no means assured, although the market for most varieties does not show firmness at present, especially for Lady Washingtons, Bayos and Pinks, which constitute the bulk of offerings. Spot stocks of Limas are light and values for same steady.

Pea, fair to good, 100 lbs.....	3 50 @ 3 75
Small White, good to choice.....	3 25 @ 3 50
Lady Washington.....	2 25 @ 2 50
Pinks.....	2 25 @ 2 50
Bayos, good to choice.....	1 75 @ 2 10
Reds.....	3 00 @ 3 25
Limas, good to choice.....	5 15 @ 5 25
Black-eye Beans.....	2 50 @ 2 75
Horse Beans.....	1 75 @ 2 00
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 75

Advices by recent mail from New York give the following review of the bean market, prices quoted being per 60-lb. bushel:

The same conditions that made so strong a market last week have largely controlled the situation again this week. Receivers have been disappointed at the smallness of the supply, and part of the time they have had absolutely no stock for the trade. All classes of buyers have run their stocks down to practically nothing, and many of the jobbers have sought eagerly for a few barrels to meet urgent requirements. Prices in consequence have further advanced and the feeling has been strong throughout. Exporters have called for some Marrow beans and sales are reported of 200 barrels good old stock at \$2.25, and 100 barrels choice at \$2.30. Perhaps three carloads have jobbed out, mostly at \$2.30. A car of new Marrow in at the close does not show very good quality, and beans are small in size. Poa have been particularly scarce, and the price for choice worked up to \$2.10 firm; some lots coming in at the close which were sold to arrive at a lower price, and we hear of some new business for prompt shipment at about \$1.95 @ 2.00. Medium have have jumped upward 15c. and are on now with Pea; the trade is calling for a good deal more stock than is available. Best marks of Red Kidney have sold dur-

ing the last half of the week at \$2.15 @ 2.17 1/2, with a few jobbing sales at \$2.20. White Kidney unchanged. A little more inquiry for Yellow Eye and feeling firmer. Holders of Turtle Soup are now asking \$1.80 @ 1.85, but no sales at the latter figure as yet. Lima cleaning up closely and \$3.60 generally asked. Higher quotations in the West have made a stronger market here for both green and Scotch peas.

### DRIED PEAS.

There are few offering, and market inclines against buyers, especially for choice Green Peas, which could probably be placed above quotations.

Green Peas, California.....	2 00 @ —
Niles Peas.....	1 75 @ —

### WOOL.

The local market shows no improvement, and it is the general belief that there will be very little done here in wool this month, or until after the election. Holders generally show no inclination to crowd stocks to sale, and it is well that it is so, for selling pressure at this date would cause a slump in prices. Eastern markets show a little more activity, but the movement is far below that for corresponding time last year.

### SPRING.

Humboldt and Mendocino.....	16 @ 17
Northern, free.....	14 @ 15
Northern, defective.....	12 @ 13
Middle Counties, free.....	14 @ 15
Middle Counties, defective.....	11 @ 13
Southern, 12 mos.....	8 @ 10
Southern, free, 7 mos.....	9 @ 11
Southern, defective, 7 mos.....	8 @ 9
Oregon Valley, fine.....	17 @ 18
Oregon Valley, coarse to medium.....	16 @ 17
Eastern Oregon, choice.....	13 @ 16
Eastern Oregon, fair to good.....	10 @ 12
Nevada, as to condition.....	11 @ 15

### FALL.

Middle County.....	9 @ 10
San Joaquin.....	7 @ 9
San Joaquin Lambs.....	8 @ 9

### HOPS.

The condition of the market is somewhat mixed, and is perhaps best defined as being firm to buyers and weak to sellers. Dealers are quoting former rates, but their bids in most instances are not in keeping with their quotations. For hops of desirable quality, and which should bring full figures, it is difficult to get bids over 12 1/2 @ 13c., and it is also difficult to buy hops of this description for less than 14c.

Good to choice, 1900 crop.....	11 @ 14
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The following review of the hop market is from a New York authority and is furnished by mail of recent date:

The harvesting of the crop in this country is completed, and from the most reliable reports that we get it is estimated that the yield in the United States is about 25,000 bales short of last year. This falling off is all on the Pacific coast; and we have taken into account the possibility of a slight increase in New York State as compared with 1899. The buying in this State is very moderate at from 13c. to 15c.; some very fine hops are reported to have brought a fraction more. The weather has been so dry that pressing can not be done satisfactorily, as the hops would be badly broken. There seems to be a scarcity of hop cloth in this country, and that may delay the movement of the crop. Prices on the Pacific coast range from 13 @ 15c. In England the crop is variously estimated at from 340,000 to 400,000 cwt., but the latter figure is generally considered too high. This amount is considerably below the consumptive requirements of that country, but it is stated that from the very large crop of last year rather full stocks are in the breweries. Our local market has undergone no change of importance. A quiet trade is passing, and the sales that are effected are well within quotations. The feeling on the whole is steady to firm.

### HAY AND STRAW.

The market for desirable qualities of both Stable and Cow hay is ruling firm, and chances are exceedingly slim for values exceeding any as the season advances. On the other hand, there is fair prospect for prices ruling still firmer later on, especially for best qualities. For very select Wheat hay \$13.50 per ton was realized. Alfalfa hay sold at an advance of 50c. @ \$1 per ton over last quoted rates. Straw market was firmer, with offerings light.

Wheat.....	9 00 @ 13 00
Wheat and Oat.....	9 00 @ 11 50
Oat.....	7 10 @ 10 50
Barley.....	6 00 @ 9 00
Volunteer.....	7 00 @ 8 50
Alfalfa.....	6 00 @ 7 50
Stock.....	5 50 @ 7 00
Compressed.....	9 00 @ 13 00
Straw, 1/2 bale.....	30 @ 42 1/2

### MILLSTUFFS.

Bran was in a little better supply than previous week, but stocks were mostly in firm hands and were steadily held. Middlings and Shorts ruled about as previously quoted, with offerings and demand

both rather light. Prices for Rolled Barley were maintained at last quoted advance. Milled Corn continued in slim supply and high.

Bran, 1/2 ton.....	15 50 @ 17 00
Middlings.....	17 50 @ 20 00
Shorts, Oregon.....	16 00 @ 17 00
Barley, Rolled.....	16 00 @ 16 50
Cornmeal.....	26 00 @ —
Cracked Corn.....	27 00 @ —

### SEEDS.

There have been no new developments in the seed market since last review. Most kinds are in too slim stock to admit of any noteworthy trading. Stocks of Mustard Seed are practically exhausted and values for the same largely nominal.

Mustard, Trieste.....	4 00 @ —
Mustard, Yellow.....	5 00 @ —
Flax.....	2 10 @ 2 50

Canary.....	3 1/2 @ 4
Rape.....	2 @ 3
Hemp.....	3 1/2 @ 4

### BAGS AND BAGGING.

The only noteworthy business in this line is in Fruit Sacks and Bean Bags. Trading in the above kinds is not active, and is at quotably unchanged rates. Wool sacks are meeting with very little inquiry, values for the same remaining quotably as last noted. Grain Bag market is lifeless.

Calcutta Grain Bags, buyer June-July.....	— @ —
Calcutta Grain Bags, spot.....	5 1/2 @ —
San Francisco Grain Bags, 22x36, spot.....	5 1/2 @ 5 1/2
State Prison Bags in lots of 200, 1/2 100.....	5 65 @ —
Wool Sacks, 4 lbs.....	— @ 32 1/2
Wool Sacks, 3 1/2 lbs.....	— @ 28 1/2
Fleece Twine.....	7 1/2 @ —
Gunnies.....	— @ 12 1/2
Bean Bags.....	4 1/2 @ 5 1/2
Fruit Sacks, cotton.....	6 1/2 @ 7 1/2

### HIDES, PELTS AND TALLOW.

Salted Hides are in fair request at slightly improved figures. Dry Hides remain quotably as before. Pelts are slow of sale and market is devoid of firmness. Tallow is selling to fair advantage, with inquiry mainly for export.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	9	8
Medium Steers, 48 to 56 lbs.....	8 1/2	7 1/2
Light Steers, under 48 lbs.....	8	7
Heavy Cow Hides, over 50 lbs.....	8	7
Light Cow Hides, under 50 lbs.....	8	7
Wet Salted Kip.....	8	7
Wet Salted Veal.....	8	7
Wet Salted Calf.....	9	8
Dry Hides.....	15	12
Dry Kip and Veal, 11 to 16 lbs.....	15	12
Dry Calf, under 4 lbs.....	15	12
Salted Horse Hides, large.....	2 00 @ —	—
Salted Horse Hides, medium.....	1 50 @ —	—
Salted Horse Hides, small.....	1 00 @ —	—
Dry Horse Hides, large.....	1 50 @ —	—
Dry Horse Hides, small.....	75 @ 100	—
Dry Colts' Hides.....	50 @ —	—
Pelts, long wool, 1/2 skin.....	75 @ 100	—
Pelts, medium, 1/2 skin.....	50 @ 70	—
Pelts, short wool, 1/2 skin.....	30 @ 40	—
Pelts, shearing, 1/2 skin.....	15 @ 25	—
Deer Skins, best summer.....	27 1/2 @ 30	—
Deer Skins, good medium.....	20 @ 22 1/2	—
Deer Skins, thin winter.....	— @ 10	—
Elk Hides.....	10 @ 12	—
Tallow, good quality.....	4 @ —	—
Tallow, No. 2.....	3 @ 3 1/2	—
Goat Skins, perfect.....	30 @ 37 1/2	—
Goat Skins, damaged.....	10 @ 20	—
Kid Skins.....	5 @ 10	—

### HONEY.

Several lots were forwarded outward the past week, aggregating over 300 cases, partly repacked, and including 100 cases in original packages, bound per sailing vessel for Liverpool. Local demand is fair. Values are being well sustained.

Extracted, White Liquid.....	7 1/2 @ 8
Extracted, Light Amber.....	6 1/2 @ 7 1/2
Extracted, Amber.....	5 1/2 @ 6 1/2
White Comb, 1 lb frames.....	13 @ 14
Amber Comb.....	11 1/2 @ 12 1/2
Dark Comb.....	8 @ 9

### BEEFWAX.

Market is firm at prevailing figures. Stocks are light, both here and in the interior.

Good to choice, light, 1/2 lb.....	26 @ 28
Dark.....	24 @ 25

### LIVE STOCK AND MEATS.

Large Government orders on the market for Beef are causing the market to rule steady for prime stock. Mutton and Lamb are without quotable change, the supply proving sufficient for the immediate demand. Small Veal is beginning to arrive more freely. Hogs are in good request at full current rates, with no excess of offerings.

Beef, first quality, dressed, net 1/2 lb.....	6 @ —
Beef, second quality.....	5 1/2 @ —
Beef, third quality.....	5 @ —
Mutton—ewes, 6 1/2 @ 7c; wethers.....	6 1/2 @ 7 1/2
Hogs, hard grain fed, medium.....	5 1/2 @ 5 1/2
Hogs, small, fat.....	5 1/2 @ 5 1/2
Hogs, large, hard.....	5 1/2 @ —



Hogs, feeders.....	5 @ 5 1/4
Hogs, country dressed.....	6 1/2 @ 7
Veal, small, # lb.....	6 @ 8 1/4
Veal, large, # lb.....	7 @ 8
Lamb, spring, # lb.....	8 @ —

POULTRY.

Continued liberal arrivals of Eastern gave most of the local poulterers ample stocks to select from. The home product, however, met with about as favorable market as during preceding week. Large and fat fowls and Large Broilers in prime condition sold to relatively better advantage than the intermediate sizes.

Turkeys, live hens, # lb.....	16 @ 17
Turkeys, live gobblers, # lb.....	16 @ 17
Turkeys, Old, per lb.....	11 @ 13
Hens, California, # dozen.....	4 00 @ 5 00
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	4 00 @ 5 00
Fryers.....	3 25 @ 3 50
Broilers, large.....	3 00 @ 3 25
Broilers, small.....	2 25 @ 2 75
Ducks, old, # dozen.....	3 00 @ 4 00
Ducks, young, # dozen.....	3 50 @ 4 50
Geese, # pair.....	1 25 @ 1 50
Goslings, # pair.....	1 50 @ 1 75
Pigeons, old, # dozen.....	1 25 @ —
Pigeons, young.....	1 75 @ 2 00

BUTTER.

There were fairly liberal receipts of fresh creamery from Humboldt and Mendocino section, but comparatively light arrivals from all other points tributary to this center. For strictly select creamery and fancy dairy the market was moderately firm at prevailing rates, but for the more common grades of fresh the market was slow and weak, packed and held stock being taken in preference.

Creamery, extras, # lb.....	29 @ —
Creamery, firsts.....	27 @ 28
Creamery, seconds.....	25 @ 26
Dairy, select.....	23 @ 27
Dairy, seconds.....	22 @ 24
Dairy, soft and weedy.....	— @ —
Mixed store.....	16 @ 17
Creamery in tubs.....	20 @ 22
Pickled Roll.....	20 @ 21
Firkin, California, choice to select.....	20 @ 21
Firkin, common to fair.....	17 @ 18

CHEESE.

Conditions remain virtually the same as noted a week ago. Mild new of high grade is in limited receipt and is selling in a small way slightly above quotable rates. Well seasoned cheese is in very fair supply.

California, fancy flat, new.....	10 1/2 @ 11
California, good to choice.....	9 1/2 @ 10
California, fair to good.....	9 @ 9 1/2
California Cheddar.....	— @ —
California, "Young Americas".....	9 1/2 @ 11 1/2

EGGS.

Prices for choice to select fresh have been further advanced, with arrivals of this sort very light. The firmness of the market, however, is confined mainly to uniformly large and white fresh eggs, arriving promptly from near-by points of production. Cold storage and Eastern eggs continue in fairly liberal stock and these are being offered at comparatively low figures.

California, select, large, white and fresh.....	36 @ —
California, select, irregular color & size.....	30 @ 35
California, good to choice store.....	25 @ 30
Eastern, as to section and grading.....	20 @ 26
Eastern, cold storage.....	— @ —

VEGETABLES.

Changes in quotable rates for vegetables were not numerous or marked, but such as were effected were mostly in favor of the producer and seller. Onions were in fair request and were not urged to sale in heavy quantity. Summer Squash was in decreased receipt and higher. Tomatoes were in very fair supply for this advanced date.

Beans, String, # lb.....	2 @ 3
Beans, Wax, # lb.....	2 @ 3
Beans, Lima, # lb.....	2 @ 3
Cabbage, choice garden, # 100 lbs.....	1 00 @ 1 25
Cauliflower, # dozen.....	50 @ —
Cucumbers, Bay, # box.....	25 @ 50
Egg Plant, # box.....	35 @ 60
Garlic, # lb.....	4 @ 5
Onions, Yellow Danver, # cental.....	50 @ 65
Okra, Green, # box.....	40 @ 60
Peas, Sweet, garden, # lb.....	3 @ 4
Peppers, Green Chile, # box.....	30 @ 50
Peppers, Bell, # lb.....	35 @ 65
Squash, Summer, # large box.....	50 @ 75
Tomatoes, River, # large box.....	30 @ 60

POTATOES.

Values have been fairly steady for best qualities of potatoes, arrivals being of only moderate volume and just about sufficient for immediate requirements. Poor qualities dragged at low prices. Oregon is beginning to forward, but it is too early for very desirable stock to arrive from that section. Sweet potatoes were in fair request at the easy figures current, \$1.25 per cental being the established price for prime Merced.

Burbanks, River, # cental.....	35 @ 50
Burbanks, Salinas, # cental.....	75 @ 1 10
Sweet Potatoes, Yellow, # cental.....	75 @ 1 25

The Fruit Market.

FRESH FRUITS.

Apple market was in fair shape for best qualities, the proportion of offerings of

this sort not being heavy. Shipping demand was considerably better than inquiry on local account. The last Australian steamer took 6,000 boxes for the colonies. Common qualities were not much sought after, and where they met with custom low figures had to be accepted. Peaches did not make much of a display, and where the quality was choice they did not lack for buyers at comparatively good figures. Pears were in only moderate stock; choice Winter Nells inclined in favor of sellers, this being the leading variety just now and bringing decidedly the best prices. Grapes show reduced supply; only late varieties of table grapes and best keepers are now offering in noteworthy quantity. Market for Wine Grapes is showing more firmness locally, with very light receipts from any quarter. In the berry line, Raspberries were in best supply; prices were without important change. Cantaloupes and Nutmeg Melons were in light stock and higher. Watermelons ruled easier, demand for same showing a falling off.

Apples, fancy, 4-tier box.....	1 00 @ 1 25
Apples, good to choice, # 50-lb box.....	60 @ 90
Apples, common to fair, # 50-lb box.....	25 @ 50
Apples, Crab, # box.....	— @ —
Blackberries, # chest.....	6 00 @ 7 00
Cantaloupes, # crate.....	1 00 @ 1 50
Figs, # 1-layer box.....	30 @ 50
Figs, # 2-layer box.....	50 @ 75
Grapes, Tokay, # box.....	40 @ 75
Grapes, Seedless Sultan, # crate.....	— @ —
Grapes, Isabella, # crate.....	— @ —
Grapes, Rose of Peru, # box.....	40 @ 75
Grapes, Black Hamburg, # box.....	40 @ 75
Grapes, Zinfandel, per ton.....	22 00 @ 27 00
Grapes, Muscat, # box.....	40 @ 75
Raspberries, # chest.....	5 00 @ 7 00
Nectarines, Red, # box.....	— @ —
Nectarines, White, # box.....	— @ —
Nutmeg Melons, # crate.....	50 @ 1 00
Plums, Coe's Late Red, # box.....	40 @ 65
Plums, fancy, # box.....	— @ —
Prunes, # crate.....	— @ —
Peaches, # box.....	40 @ 75
Peaches, wrapped, # box.....	75 @ 90
Peaches, Cling, # ton.....	— @ —
Peaches, Freestone, # ton.....	— @ —
Pears, Winter Nells, # box.....	75 @ 1 25
Pears, common kinds, # box.....	30 @ 75
Persimmons, # box.....	50 @ 1 00
Pomegranates, # small box.....	40 @ 65
Pomegranates, # orange box.....	1 50 @ 2 00
Quinces, # box.....	25 @ 50
Strawberries, Longworth, # chest.....	6 00 @ 8 00
Strawberries, Large, # chest.....	2 50 @ 5 00
Whortleberries, # lb.....	5 @ 8
Watermelons, # 100.....	8 00 @ 20 00

DRIED FRUITS.

The market for most descriptions of cured and evaporated fruits has ruled quiet during the week under review, although there has been some movement outward, the last Australian steamer taking 154,000 lbs. of various kinds, and 31,000 lbs. were forwarded to British Columbia per Monday's steamer. Jobbers have stocks on hand, however, to transact a much larger business than they are being favored with, and are consequently for the time being doing very little purchasing of offerings from first hands, not caring to operate, except at prices decidedly to their suiting. Quotable values show very few changes, but under selling pressure, lower figures than are nominally current would have to be accepted. Pears and Peaches appear to be in the most unfavorable position for sellers, especially qualities under fancy, with few of latter sort offering, and no noteworthy disposition to crowd such stock to sale. The Apple market is slow and for the ordinary run of offerings shows weakness. There are on market some sliced of only fair quality in 50-lb. boxes for which 4c. would be the utmost obtainable at this date. Figs are unfavorably affected by the importation of the Smyrna product, and concessions to buyers are being made rather than miss sales. Pitted Plums are ruling fairly steady, due more to limited offerings than to active inquiry at full current rates. Apricots remain in light stock and buyers in quest of this fruit find it necessary to meet the views of sellers or go without. Choice to fancy are more likely to rule higher than lower as the season advances. Prunes are moving to a moderate extent, both large and small sizes, the former being mainly wanted abroad. With cooler weather East a little later on, an increased output of this fruit is looked for.

EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	6 1/2 @ 7
Apricots, Royal, choice, in sacks, # lb.....	7 1/2 @ 8
Apricots, Royal, fancy.....	9 @ —
Apricots, Moorpark.....	9 1/2 @ 11 1/2
Apples, in 50-lb boxes, rings, pressed, fancy.....	5 1/2 @ 5 1/2
Apples, 50-lb boxes, rings, pressed, good to choice.....	4 1/2 @ 4 1/2
Figs, White, fancy pressed.....	6 @ 7
Nectarines, # lb.....	4 @ 6
Peaches, unpeeled, fancy.....	6 @ 6 1/2
Peaches, unpeeled, choice.....	5 @ 5 1/2
Peaches, peeled, in boxes.....	11 @ 14
Pears, unpeeled Bartlett's, halved, fancy.....	6 @ 6 1/2
Pears, halved, unpeeled Bartlett's.....	5 @ 5 1/2
Pears, quartered, unpeeled Bartlett's.....	4 1/2 @ 5 1/2
Plums, Black, pitted.....	4 1/2 @ 5 1/2
Plums, White and Red.....	5 1/2 @ 6 1/2
Prunes, Silver.....	4 1/2 @ 6

COMMON SUN-DRIED.

Apples, sliced.....	3 @ 3 1/2
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Apples, quartered.....	3 @ 3 1/2
Figs, Black.....	2 @ 2 1/2
Figs, White.....	3 @ 3 1/2
Peaches, unpeeled.....	4 @ 5

Prices for new crop Prunes, as named by the California Cured Fruit Association: Santa Clara four sizes, 3c. per lb.; 40-50s, 7c.; 50-60s, 5 1/2c.; 60-70s, 3 1/2c.; 70-80s, 3 1/4c.; 80-90s, 2 1/2c.; 90-100s, 2 1/4c.; 100-120s, 2c., which is the uniform price for this grade; Sonomas, other than smallest, 1/4c. less; other districts, 1/4c. less, except for smallest; Ruby, 1/4c. premium.

Mail advices of recent date from New York City furnish the following report of the dried fruit market:

New evaporated apples have been in quite free supply this week and have shown very attractive quality, though the fruit has lacked keeping qualities and has had to be forced out promptly; sales of fancy reported early in the week at 6c., choice at 5c. and prime at 4 1/2c.; but under pressure to move the stock prices have gradually declined, with 4c. about top at the close for prime and 6c. very extreme for fancy. There have been very few contracts made this week for futures, though later-made fruit of desirable quality is worth more than spot goods, prime apples being quoted at \$4.50 for October delivery, \$4.40 for November delivery and \$4.25 @ 4.30 for December delivery. The few old evaporated apples remaining are working out slowly at about rates quoted on new, possibly a little more. Old sundried apples have been cleaned up, and some new commencing to arrive and meeting with moderate attention in ranges quoted; no Western or Northwestern quarters here as yet. New chops and waste nominal in absence of supply, and old fruit, which is generally of poor quality, receives little attention; new quoted for future delivery at 1 1/2c. for chops and 1c. for cores and skins. Southern peaches receiving little attention and doubtful if 8c. could be exceeded on important quantities. Cherries firm and higher. Raspberries in small supply and firm, with fancy occasionally bringing a premium. Practically no huckleberries here and quotation nominal. Blackberries easy, with 5c. extreme. California apricots and peaches have ruled quiet, but held about steady in price. New prunes are beginning to arrive.

Apricots, Cal., Moorpark, 1900.....	10 @ 14
Apricots, Cal., 1900, # lb.....	8 @ 9
Peaches, Cal., unpeeled, in bxs, # lb.....	7 1/2 @ 9 1/2
Peaches, Cal., unpeeled, in bags, # lb.....	7 @ 9
Prunes, Cal., # lb.....	4 1/2 @ 7 1/2

RAISINS.

A very fair business is doing in Raisins, and market for loose Muscatels and layers is firm at prevailing rates. The crop is now mostly in, but is comparatively light, and it would not be surprising to see values higher before the season closes. Sultan and Thompson's Seedless are now commanding a premium and are not obtainable in great quantity at any figure.

F. O. B. FRESNO DELIVERY.—CARLOAD LOTS.

Imperial Clusters, 6-crown, # 20-lb box.....	3 00 @ —
Dehesa Clusters, 5-crown.....	2 50 @ —
Fancy Clusters, 4-crown.....	2 00 @ —
London Layers, 3-crown, # box.....	1 60 @ —
do do 2-crown, # box.....	1 50 @ —
(Usual advance for fractions.)	
Loose Muscatel, 4-crown standard, # lb.....	— @ 7
Loose Muscatel, 3-crown.....	— @ 6 1/2
Loose Muscatel, 2-crown standard.....	— @ 6
Loose Muscatel, seedless.....	— @ 6 1/2
(Above prices for loose raisins are for 50-lb boxes.)	

Thompson Seedless.—Bleached fancy, # lb., 12c; choice, 11c; standard, 10c; prime, 9c. Unbleached, 9c.

Sultanas.—Bleached fancy, # lb., 10 1/2c; choice, 9 1/2c; standard, 8 1/2c; prime, 8c. Unbleached, 8c.

CITRUS FRUITS.

Orange market is steady, but is not showing much life. Late Navels and Valencia are in very fair supply for this date. Lemon market shows no quotable improvement, although weather has been more favorable for consumers taking hold of this fruit. Limes were in increased stock and prices tended downward.

Oranges—Navel, # box.....	2 50 @ 4 00
Valencia, # box.....	2 00 @ 4 00
Seedlings, # box.....	1 50 @ 2 00
Lemons—California, select, # box.....	3 00 @ —
California, good to choice.....	2 00 @ 2 75
California, common to fair.....	1 25 @ 1 75
Limes—Mexican, # box.....	4 00 @ 4 50
California, small box.....	50 @ 75

NUTS.

Almonds are not obtainable in large quantity, and especially are soft shell in light supply. Market is decidedly firm. New crop Walnuts are beginning to arrive in wholesale quantity and are moving readily at the established rates, with every prospect at present that values will be no lower this season.

California Almonds, shelled.....	24 @ 27
California Almonds, paper shell, # lb.....	13 @ 15
California Almonds, soft shell.....	10 1/2 @ 12 1/2
California Almonds, hard shell.....	7 @ 8
Walnuts, White, soft shell.....	8 1/2 @ 10 1/2
Walnuts, White, California, standard.....	7 1/2 @ 10
Chestnuts, California Italian.....	10 @ 12 1/2
Peanuts, California, fair to prime.....	5 @ 6



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WINE.

No prices for new wines have been so far reported, and indications are there will be very little to offer from first hands, owing to the active demand and sharp competition among buyers this season for wine grapes. There are few grapes now left in the vineyards. Quotable values are at a wide range, \$17 @ 27 per ton for dry wine grapes, as to quality and conditions. Very select as to kind and quality would probably command over latter figure. A shipment of 214,384 gallons of wine went forward per steamer Barra-couta, sailing for New York on 5th inst. The Panama steamer sailing Tuesday carried 262,400 gallons wine, mostly for New York.

Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1900.	Same time last year.
Flour, 1/2 sacks.....	111,678	1,527,874
Wheat, centals.....	68,342	1,290,604
Barley, centals.....	56,086	1,705,759
Oats, centals.....	10,945	293,225
Corn, centals.....	1,325	16,945
Rye, centals.....	—	70,182
Beans, sacks.....	25,757	71,335
Potatoes, sacks.....	32,237	409,451
Onions, sacks.....	13,639	80,152
Hay, tons.....	3,873	62,955
Wool, bales.....	1,239	11,975
Hops, bales.....	1,011	3,980

EXPORTS BY SEA.	Since July 1, 1900.	Same time last year.
Flour, 1/2 sacks.....	94,548	742,548
Wheat, centals.....	94,583	1,200,390
Barley, centals.....	1,338	1,018,050
Oats, centals.....	3,000	34,095
Corn, centals.....	—	12,704
Beans, sacks.....	304	5,601
Hay, bales.....	10,088	40,392
Wool, pounds.....	—	233,621
Hops, pounds.....	45,356	162,794
Honey, cases.....	310	1,340
Potatoes, packages.....	2,855	20,128

California Dried Fruit at New York.

NEW YORK, Oct. 10.—Evaporated apples, common, 3 @ 40; prime wire tray, 4 1/2 @ 5 1/2; choice, 5 1/2 @ 6c; fancy, 6 @ 6 1/2.  
California dried fruits.—Market is fairly steady, but movement is not brisk.  
Prunes, 3 1/2 @ 7 1/2.  
Apricots, Royal, 11 @ 140; Moorpark, 15 @ 17c.  
Peaches, unpeeled, 6 @ 90; peeled, 14 @ 180.





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## THE VETERINARIAN.

### Abortion in Cows.

TO THE EDITOR:—Can the PACIFIC RURAL PRESS give an explanation of the malady known as abortion in cows? The dairymen of Marin county have had varying experiences, and, so far as I know, they have not been able to learn the reason or a remedy for the trouble. In some instances one-half the cows of a herd will lose their calves in one season by premature birth. Gradually the malady in this herd will disappear; but the same trouble will affect another herd in the same locality. The affection ebbs and flows in such a puzzling manner that the dairymen desire enlightenment as to the cause, and, if possible, a practicable remedy. The matter is worthy of the special investigation of State officials, if it has not already received such attention.

San Rafael, Sept. 25. INQUIRER.

The premature birth of calves is a most serious matter in which California suffers with the rest of the world, and it is a matter which few dairymen understand. We have previously discussed the subject in the PACIFIC RURAL PRESS, but new readers may still be somewhat in the dark concerning it. One of the most comprehensive and at the same time the most succinct account we have ever seen was recently read at a meeting of the Irish Central Veterinary Association by E. C. Winter, F. R. C. V. S., Limerick. We shall draw from this and advise readers to make note of it in case the trouble should arise in their herds.

**OCCURRENCE.**—The amount of money lost annually to dairy farmers and stock raisers by the abortion of their cows is almost incalculable; the former in most cases losing the season's milk from the affected cow, or the greater part of it at least, as aborted cows never milk so well as if they calved normally, and the latter losing the calves for that season, and often the next one as well, and also the services of any bull or bulls who may have served an affected cow, it being well known that the bull is often a fruitful cause of spreading the contagion from cow to cow and herd to herd. Abortion may occur at any period of gestation, but it is most common at what is known as half time. In cattle it generally takes place about

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the fourth or fifth month, but may occur at any time between the third and seventh month, after which time it rarely or never occurs.

**TWO FORMS.**—Abortion is now recognized in two distinct forms: the sporadic and the epizootic or contagious form. The sporadic form is seen in isolated cases and is generally due to some accident, whether physical or dietetic, or to constitutional disease in the mother. The epizootic form is now well known to be contagious, and due to a specific germ. Galtier in 1890 claimed to have proved the contagious nature of this disease, and says it exists primarily in the mother and secondly in the foetus. The old-fashioned theory that existed, and still exists in many parts of this country, that abortion might be brought about by sympathy between pregnant cattle is now exploded, and the cause of its spread traced to the true cause, i. e., contagion.

**CAUSES OF SPORADIC CASES.**—Direct violence, such as kicks from brutal attendants or from horses, being horned by other cattle, or crushed in narrow doorways, or slipping upon smooth floors or ice, are common factors in the production of sporadic cases of this disease. Fright and excitement have from time to time caused both mares, cows and ewes to abort. Any disease, such as tubercle, foot and mouth disease, and pleuro-pneumonia in cattle, and laminitis, pneumonia, lymphangitis and allied diseases in mares, may so affect the constitution of the mother as to produce abortion. Colic in foal mares is nearly always followed by abortion.

**CONTAGIOUS OCCURRENCE.**—Having given some of the causes of sporadic abortion, I will now proceed to speak of the epizootic forms, the cause of which may be summed up in one word—contagion. Although it is difficult to produce abortion artificially by dietetic errors, or the administration of drugs, no such difficulty exists in producing the disease by direct contact of an affected cow with a pregnant one, or even by indirect transmission through a bull that has previously served an affected cow; and an affected cow should not, for this reason, be put to the bull for a period varying from one to three months after abortion, or until all discharge from the vagina has disappeared and the genital organs have resumed their normal healthy tone. Should this precaution not be adopted, every cow subsequently served that season by the bull is liable to abort, and in turn affect every member of the herd she may be brought into contact with. The introduction of a cow from an affected herd, whether the cow in question has herself aborted or not, is always fraught with danger; and in cases where no fresh cows have been brought in the cause of an outbreak might reasonably be looked for in a bull or bulls that have served the cattle the previous season. Cows heavy in calf do not readily abort, even when placed in contact with affected cows, but they are very liable to do so the following season. Cows having aborted one season and being served again generally carry their calves for a longer period next season and finally become immune—that is, if they do not become sterile, as unfortunately 50% to 60% of them do; but should a cow prove in calf for a second or third season, she will resist the action of the virus for the future. Of course, in the case of ordinary dairy cattle the cows

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would not be worth retaining for a season or two on this chance, but in the case of pedigree cattle of great value the fact might be worth remembering. Cases of abortion have been known to follow the introduction to a stock yard of a calf only fourteen days premature, and even the introduction of the skin of an aborted foetus.

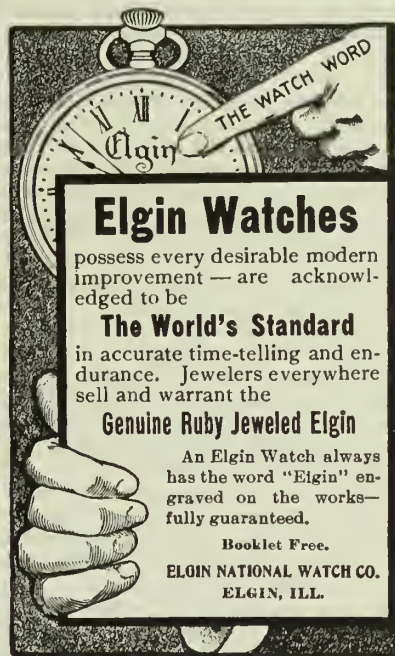
**COMMUNICATION OF CONTAGION.**—In the case of contagious abortion the virus enters through the vagina and propagates between the foetal membranes and the uterus, and where the contagium has entered treatment is useless as far as that particular host is concerned. The bacteria are conveyed through the membranes to the foetus, and their products and the products of the decomposition of the membranes set up irritation and sever the connection between the foetal membranes and the uterus, and so favor the expulsion of the foetus. Experimentally the disease has been produced by placing a little of the discharge from an affected cow within the vulva of a healthy one, and even by rubbing the foetus about the vulva or buttocks of healthy cows. In these cases abortion follows sometimes as early as fourteen days after. MacFadyen and Woodhead have produced abortion in this way in ewes, and have proved that the virus of one species is quite capable of producing the disease in other species.

**INFLUENCE OF UNSANITARY SURROUNDINGS.**—The unsanitary conditions under which cows are kept are largely responsible for the spread of this disease. The cows themselves are never, as a rule, cleaned, and the drainage from one end of the byre generally runs down along all the stalls to the other end, often remaining in pools of filth behind the cows, who get their buttocks and tails soaking with it and so bring it into direct contact with their vulvas, and things are in this way made very easy for the entrance of the germ, who on his part is not slow to do the rest. In this way one cow in a byre may affect the rest of the inmates. The contamination of the litter and stalls, as well as the hands and clothing of the attendants, are also fruitful sources of the spreading of the contagion, and, as I have before remarked, a bull that has served an affected cow may spread the disease through a whole district. A cow coming from an affected herd, or having been in contact with an affected animal, may spread the disease although she may not herself have been affected.

**SYMPTOMS.**—The symptoms of abortion are sometimes similar to those of approaching parturition, but the indications, as a rule, only show a few days or weeks before delivery, instead of, as in normal parturition, coming on gradually for a comparatively long period. In cattle about to abort there is never the same relaxation of the parts about hips and vulva, nor does the udder become as full or hot as in normal parturition. The foetus is, as a rule, expelled quickly and the membranes are usually retained, often for a considerable number of days. The discharges from the vagina are acrid and foul smelling; the foetus is nearly always born dead, and often assumes a parboiled or macerated appearance, owing to the action of the decomposed uterine fluids. Cows that abort lose their condition and do not seem to recover their normal state of health for a long time.

**PREVENTION.**—No treatment of this affection can avail once the germs have entered the uterus of a cow, and our attention must be directed to the prevention of the disease in the remainder of the herd; that is best accomplished by disinfection and the free use of antiseptics, as well as bestowing attention

on the general hygienic surroundings of the herd. All foetuses and foetal membranes, as well as soiled litter, should be burned; cows that have aborted, or appear likely to abort, should be at once isolated; and in connection with this matter I may add that any cow purchased should, if the slightest suspicion exists, be also isolated, say for a couple of months. No attendant that touches an aborted cow should be allowed to have any recourse to the others, if at all possible, and if this is not practicable, the hands and boots of such attendant should be thoroughly cleansed and disinfected after each visit to the affected cow. The placental membranes are, as a rule, retained after abortion, and should at once be removed and burned. This removal of the membranes is not by any means one of the sweets of the veterinary profession, and apart from the offensive smell, which sometimes will cling to the hands for days at a time, the practitioner runs a serious risk of getting blood poisoning, and too much caution cannot be exercised in cleaning and disinfecting the hands and arms.



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### SHEEP AND GOATS.

**C. P. BAILEY,** San Jose, Cal. Angora Goats and Persian Fat-tailed Sheep. Catalogue free.

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We keep all the leading varieties. Have 60 breeding yards. Why not improve your stock. Man't's of the Improved Pacific Incubator. Absolutely self-regulating, hot water. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember the Best is the Cheapest.

**PACIFIC INCUBATOR CO.,**  
1317 Castro Street,.....Oakland, Cal.

**LEE D. CRAIG,**  
Notary Public and Commissioner of Deeds,  
316 MONTGOMERY STREET,  
Bet. California and Pine, SAN FRANCISCO, CAL.

## THE LYNWOOD HERD OF SWINE

is still in the lead. We have again secured our share of the premiums at the State Fair, with the hottest competition ever seen there. We were awarded 15 ribbons—4 firsts, 8 seconds, and 3 sweepstakes. This week we exhibit at the Oregon State Fair, and the two weeks following (Sept. 24-Oct. 6) at San Mateo. Any one interested in seeing a PRIZE HERD should call at our pens. Our sows have been large and at present have but a few pigs left. Correspondence solicited.

**SESSIONS & CO.,** 117 E. 23rd St., Los Angeles, Cal.

## GLENN RANCH, Glenn County, :: :: California, FOR SALE In Subdivisions.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for county and State taxation purposes.

This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

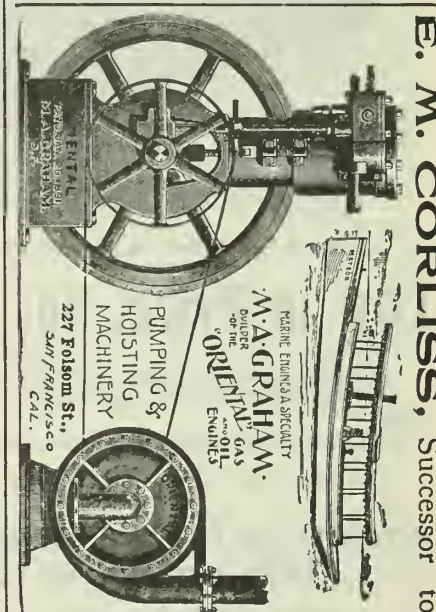
The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

**F. C. LUSK,**

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.



**E. M. CORLISS, Successor to**  
PUMPING & HOISTING MACHINERY  
227 Folsom St.,  
SAN FRANCISCO  
CAL.  
W. A. GRAHAM  
SOLE AGENT  
OF THE  
"ORIENTAL GAS ENGINE"  
CALIFORNIA SPECIALTY

## Cooper's Sheep Dip.

Leading Dip of the World  
Sixty Years.

USED ON 150,000,000 YEARLY.

Not a refuse product of tobacco or dye factories. A sheep dip invented and made specially for sheep. You are asked to use it because it is the best. It occupies a supreme position in all countries. It is free from objections so common in others. It cures without injury. No smell.

General Agents, **SHOUBERT-BEALE CO.,**  
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## THE NEW EGG FARM.

By H. H. STODDARD.

A practical, reliable manual upon producing eggs and poultry for market as a profitable business enterprise, either by itself or connected with other branches of agriculture. It tells all about how to feed and manage, how to breed and select, incubators and brooders, its labor-saving devices, etc. 12mo., 331 pp., 140 original illustrations, cloth. Price, \$1 postpaid.

**PACIFIC RURAL PRESS,**  
330 MARKET ST., SAN FRANCISCO, CAL.

## ALMOND HULLERS

For Sale by  
**A. O. RIX,** Irvington, Alameda County, Cal.



## Well Drillers! Use LOOMIS' "Clipper" Driller.

The Standard  
of America!

Strongest! Takes least power! Carries heaviest tools! Drills much faster! Most convenient to handle! Will last longer and make the owner more money than any other Well Drill on earth.

We also make many other machines for drilling wells of all diameters and depths. Machines for Horse, Steam, and Gasoline Power. Write for full particulars.

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SPECIAL.—Men's Black Clay Worsted Suits, either cutaway or sack, worth \$10.00 for \$4.95. Send \$1.00 with order and pay balance plus the express charges to your Agent upon receipt of this suit. They will not last long.

Address this way:  
Julius Hines & Son, Baltimore, Md. Dept. 43

## Patrons of Husbandry.

### Farmers' Mutual Insurance.

By JAMES MORGAN, Montecito, at the  
Carpenteria Institute.

Success in any business depends upon the apparently simple proposition of having the income thereof exceed the outlay, and is attained quite as often by a judicious contraction of the latter as by a lucky expansion of the former. The blunder that is so frequently made, of using the bung-hole of the barrel as the outlet, and the spigot as the inlet, is the open secret of the failure of men of all grades, from the day laborer to the merchant prince. Hence it is that farmers, whose margin of profit is usually small at the best, find it necessary to look well to the debit side of the ledger. While the progressive farmer is ever on the alert, to increase the productiveness of his acres, be they few or many; while he is making a careful study of fertilization, and methods of cultivation in the commendable effort to "make two blades of grass grow where but one grew before," the conservative man oftentimes outstrips him in financial success, by adhering to old methods and so carefully "watching the corners" as to save a modicum of his meager income. Thus it is that economic questions of all kinds force themselves upon the attention and consideration of the farmer, and Farmers' Institutes everywhere devote much time to the discussion of such questions as transportation, taxation, exorbitant prices of farm supplies and markets. Then why not investigate the matter of insurance of farm property?

Insurance, though not exactly a legitimate item of expense in running a farm, is one of the safeguards against the effects of an accident that may wipe out the accumulations of a lifetime of hard labor, that every prudent man feels to be his duty to secure.

The contemplation of the possibility of seeing his home reduced to ashes; his furniture, which has been secured by toil and sacrifice, all gone; or his barn, filled perhaps with his season's crop, with the proceeds of which he has hoped to lift a mortgage, and free himself and family from a load that has galled and worried them for years, all go up in smoke, is so unpleasant that he determines to guard against this nightmare that haunts his thoughts by day and his dreams by night, by insurance. Thus decided, he looks around him to ascertain where he can find the best insurance for the least outlay. He finds companies without number; rich companies; old companies; foreign companies; but soon learns that the element of competition, the vaunted "life of trade," has been eliminated, that all belong to "the Board," to a combination fixing rates, a combination so strong that it has been declared by the Supreme Court of at least two States to be a veritable trust. He finds that by and through their exorbitant rates many of these companies have become immensely rich, that they boast of their millions of surplus, and that they pay their officers princely salaries.

These facts have caused men to think, and thinking has led them to realize that this surplus and these salaries come from the people who insure, and who pay to these companies rates that far exceed the actual cost. So these thinking men have gone to work under the principles of co-operation and organized companies to furnish safe insurance at cost. This effort has met with the most bitter and determined opposition from these wealthy corporations and trusts. But the mutual in-

surance companies have secured a legal standing in many States, and farmers' mutuals have passed beyond the experimental state, and have evidently come to stay. These associations are local, including sometimes two or more adjacent counties, but more commonly but one county, and often but three or four townships.

Iowa is acknowledged to be the leading State for this class of insurance. It contains ninety-nine counties, but the State auditor's report for insurance business of 1897 shows 148 farmers' county mutuals, carrying risks of \$138,783,129.34, at a cost per \$1000 of \$2.44. The auditor's report for business of 1898 shows 150 farmers' county mutuals carrying risks of \$148,978,944.58, an increase of over \$10,000,000 during the year at a cost of \$2.15 per \$1000. And the cost for these years are much above the average.

The Springdale, Cedar County, Mutual Fire Insurance Company, with whose directors and secretary I am well acquainted, makes a report, April 2, 1900, as having been in operation twenty-nine years at an average cost to policy holders of but \$1.30 per \$1000. It was then carrying risks amounting to \$1,100,000. Besides these, 150 county associations which carry risks on farm or detached property only, there were in 1898, eleven State mutuals, carrying risks, much of it being on towns and mercantile property, amounting to \$17,863,706, at a cost of about one-half the current stock company rates. Ohio reports show over 100 farmers' mutuals, with but one failure and that without loss to policy holders.

Those having had the longest experience in this class of insurance claim that time has fully established the following points of excellence:

First—A great saving in cost.

Second—A more satisfactory and reliable insurance.

Third—More prompt payment of losses.

Fourth—The keeping of a large sum of money at home instead of sending it off to Eastern cities or foreign countries.

The regular rates of stock companies here in California is \$6.00 per \$1000 per annum, payable in advance. The rates of mutuals as shown above is less than one-third of this in States where lightning in summer and roaring hot fires in winter are the most prolific causes of losses. These rates also insure against damage by lightning, a risk that counts for but little to us, but which is quite an item in the central West. With these considerations in our favor, it seems safe to say that at least three-

## MACBETH'S "pearl top" and "pearl glass" lamp-

chimneys are carefully made of clear tough glass; they fit, and get the utmost light from the lamp, and they last until some accident breaks them.

"Pearl top" and "pearl glass" are trade-marks. Look out for them and you needn't be an expert.

Our "Index" describes all lamps and their proper chimneys. With it you can always order the right size and shape of chimney for any lamp. We mail it FREE to any one who writes for it.

Address MACBETH, Pittsburgh, Pa.

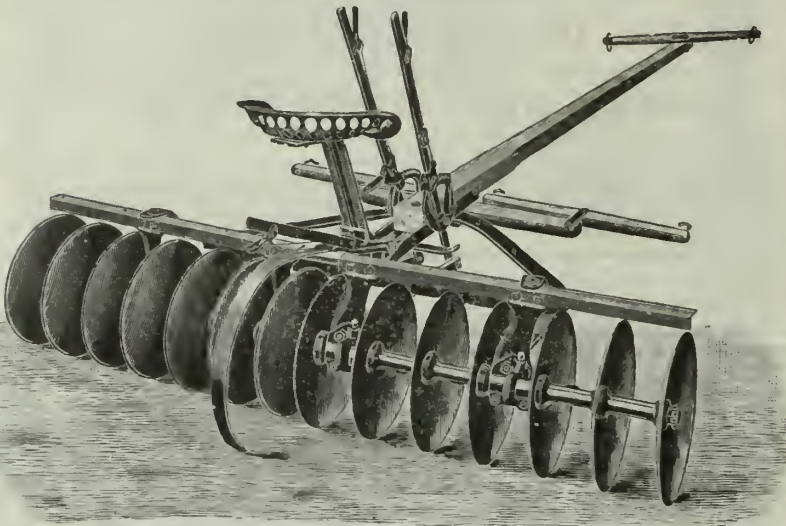
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Sizes 6 to 12 feet in 16 and 20-inch Discs, Solid or Cutaway.

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HARROW is accurately balanced whether the driver is on or off the seat. A CENTER TOOTH cuts out the ridges always left by Harrows of this class.

LINE OF DRAFT is direct from center of gangs.

ALSO FULL LINE OF

Reversible and Flexible Disc Harrows, Sulky Set Lever Spring Tooth Harrows, Set Lever Peg Tooth Harrows.

FOR CATALOGUE AND PRICES, ADDRESS

**D. M. OSBORNE & CO.,**

13 & 15 Main St., :: San Francisco, Cal.

## A MACHINE WITHOUT A FAULT. The Improved U. S. Separator.



MAPLETON, MINN., Feb. 14, 1900.  
After using a No. 7 Improved U. S. Separator 10 months it is very gratifying to report it free from faults. It is durable, easily run, easily cleaned, and its morning and evening task is performed so satisfactorily a thrill of contentment pervades the entire family; in marked contrast with the turbulent times which so harass the life of the unprogressive farmer.

O. W. HEALY.

Write for circulars containing hundreds more like the above.  
VERMONT FARM MACHINE CO., Bellows Falls, Vt.

## Nitrate of Soda as a Fertilizer.

## QUICK FERTILIZER.

There is nothing in the American market to-day that acts so quickly and surely as a fertilizer as

## NITRATE OF SODA.

Apply to the surface in the spring. A small quantity does the work. Watch the crops closely and when they look sick or make slow growth apply the remedy promptly.

—FOR SALE BY—

BALFOUR, GUTHRIE & CO.,

316 California Street, - - - San Francisco, Cal.

Write to them for pamphlets.

## \$50.00 RANGE FOR \$25.00

TO INTRODUCE OUR

TRIUMPH STEEL RANGE into every section of the United States, we will for a short time deliver at your depot free of charge our highest grade Steel range for \$25.00. The regular retail price is \$50.00. It has six 8-inch lids. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21 1/2 inches deep, and 15-gallon reservoir. Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet. Best Range made. WM. G. WILLARD, Manufacturer, 619 N. Fourth St., St. Louis, Mo. Will ship C. O. D. with privilege of examination.



STATE OF OHIO, CITY OF TOLEDO, } ss.  
LUCAS COUNTY,

FRANK J. CHEYNEY makes oath that he is the senior partner of the firm of F. J. CHEYNEY & CO., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of CATARRH that cannot be cured by the use of HALL'S CATARRH CURE.

Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1898.

A. W. GLEASON,  
Notary Public.  
Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces of the system. Send for testimonials, free.

F. J. CHEYNEY & CO., Toledo, O.  
Sold by Druggists, 75c.  
Hall's Family Pills are the best.





fourths of the amount paid by our farmers for insurance can be saved by co-operative farmers' insurance.

In this county there are about 1700 farmers enrolled on the Great Register, and it is low estimate that the average amount of insurance carried by these be \$1000. The saving of \$4.50 per \$1000 would amount to \$7650 per annum.

But this is not all.

The many conditions that form a part of the policy of the stock companies are of such a nature that one can never feel sure that a loss, if one should occur, would be promptly paid. And it is a fact that a large percentage of these losses are paid, if paid at all, at the end of a vexatious lawsuit. A late Missouri paper gives a list of seventy-three cases of this kind that are pending in that State alone. It is the policy of the stock company to make the best possible terms of settlement for the company; the policy of the mutuals is to do the best possible for the neighbor who has suffered the loss. The assurance of being fairly and liberally treated is a consideration of great value.

Again: the old line method tends to drain the country of money, as not only the amount of overcharge but the total amount paid for insurance is paid in advance, and is at once sent to the money centers in the Eastern cities. Probably not less than \$10,000 annually leaves our county for farmers' insurance, not over 25% of which ever returns in payment of losses.

From this showing it is not strange that the farmers' mutuals are rapidly gaining ground all over the country despite the adverse influences that the stock companies, with their millions of surplus, have everywhere thrown in their way. California is behind the States in the Mississippi valley in this work. Not until April 1, 1897, was there a law in this State under which farmers could organize and successfully carry their own insurance. Under that law twenty-five persons owning insurable property to the amount of \$50,000 can organize, incorporate and insure detached dwellings, churches and school-houses. Every person having property insured becomes a member, and can be assessed for their proportionate amount of any loss, these assessments being collectable by law, the property being held for the same. Any person becoming dissatisfied can withdraw at any time, by paying their pro rata of all losses to that date. Companies have been organized in several counties of this State, and a nucleus of a State organization been commenced. These State organizations are merely councils for the discussion of methods, and have no connection with the financial arrangement of the individual companies. In March last a national mutual convention was held in Indianapolis, Ind., which was largely attended.

What is in the way of the farmers of this county organizing and reaping the benefits of co-operation in this matter at once? If the information, the facts and figures that I have been able to glean from a variety of sources shall in any manner assist in causing my brother farmers to take hold of this matter in dead earnest, my object will have been attained.

#### At the State Grange.

Continuing our notes on the session of the State Grange it was shown on the morning of the second day that out of the forty-five Granges in the State forty had their representatives present, and the morning session was consumed by the reading of the reports presented by the Master in each subordinate Grange.

At the afternoon session the Committee on Good of the Order made a partial report. A change was made in the State Grange constitution whereby members may obtain withdrawal cards

upon application for same without the payment of \$1 as heretofore.

The evening session was taken up by the presentation and reading of resolutions and considering of reports.

The third day's session of the State Grange was opened Thursday morning by the Worthy Master. Reports of the remaining committees were received and accepted.

The place of holding the next annual meeting then came up. Three places were in the field for the honor, viz., Sacramento, San Jose and Petaluma. Petaluma put up a great fight and won, the other two places withdrawing. Memorial services were held in memory of deceased members who died within the year.

The afternoon session was devoted to a discussion of different subjects under "Good of the Order."

In the evening the fifth and sixth degrees were conferred, after which the feast of Pomona was enjoyed in the large banquet room of the Masonic Hall.

The following officers will serve another year: Master, G. W. Worthen, San Jose; Overseer, C. W. Emery, Oakland; Lecturer, J. S. Taylor, Napa; Steward, E. C. Shoemaker, Visalia; Assistant Steward, I. C. Steele, Jr., Pescadero; Chaplain, Mrs. S. H. Dewey, Oakland; Treasurer, A. D. Logan, San Francisco; Secretary, Miss Laurola S. Woodhams, Santa Clara; Gate Keeper, M. D. Hopkins, Petaluma; Pomona, Miss Belle Johnston, Courtland; Flora, Miss Etta Cornell, Mills; Ceres, Mrs. Cora Beecher, Stockton; Lady Assistant Steward, Miss Delma Green, Courtland; Organist, Miss Lena Loll, Sheldon.

Word has come from the National Grange headquarters that the secretary of the California State Grange, Miss Laurola S. Woodhams of Santa Clara, is the best secretary in the organization.

#### List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
PIONEER PATENT SOLICITORS  
FOR PACIFIC COAST.

FOR WEEK ENDING SEPTEMBER 25, 1900.  
658,616.—BROOM HOLDER—H. Blome, McMinnville, Or.  
658,479.—TIRE REMOVER—B. M. Buckland, Poplar, Cal.  
658,718.—SPEED GEAR FOR BICYCLES—J. A. Cardinell, S. F.  
658,497.—METALLIC LATHING—M. Carrick, S. F.  
658,482.—CHECKING DEVICE—C. J. Castera, Jr., Los Angeles, Cal.  
658,358.—TOP—W. R. Ellis, Livermore, Cal.  
658,708.—GUN SIGHT—S. E. Fischer, S. F.  
658,709.—GUN SIGHT—S. E. Fischer, S. F.  
658,500.—AXLE NUT—W. H. Holliday, Oakdale, Cal.  
658,647.—HAY RAKE—J. H. Hughes, Alicel, Or.  
658,374.—ADVERTISING DEVICE—J. N. Johnson, Prescott, A. T.  
658,503.—BED BOTTOM—G. H. McBride, S. F.  
658,728.—BOILER FEEDER—H. C. Needham, Los Angeles, Cal.  
658,672.—STAMPING MACHINE—C. M. Pierce, Weston, Or.  
658,397.—THRILL COUPLING—O. H. Platt, Chico, Cal.  
658,533.—DOOR CHECK—D. Schuyler, San Diego, Cal.  
658,516.—NOZZLE DEFLECTOR—J. W. Smith, Weaverville, Cal.  
658,687.—FIRE ESCAPE—J. M. Swift, Selma, Cal.  
658,495.—EARTH DRILL—H. E. Williams, San Jose, Cal.  
658,692.—HOSE COUPLING—R. Williams, Walla Walla, Wash.  
658,496.—WAGON GEAR—G. T. Willis, Fresno, Cal.

As THIS is a presidential year, swinging around the circle is in order. We doubt if any circling has been more effective and satisfactory than that done by Sessions & Co.'s show herd of hogs. We hear that they have returned to their home place near Los Angeles, after making a trip of about 2500 miles, showing at fairs, and that they captured fifty-three prizes during the trip. Their last appearance for the season will be at the Los Angeles Fair, October 20 to 27, after which they will settle down and recruit their numbers, to make up for the many sales made during the fair season.

## PRODUCTIVE FARM LAND.

### For Sale in Tracts to Suit.

Come and see the crops growing on the Rancho Santa Clara del Norte. Now is the time.

A large ditch runs through the property, guaranteeing ample water rights to irrigate every acre of land.

Farmers and orchardists seeking good productive land for all kinds of crops—Beans, Beets, Alfalfa, Corn, Barley, Walnuts, Apricots and Lemons—will do well to look into this proposition before investing elsewhere.

The climatic conditions are as near perfect as possible.

For full information, apply to GEO. C. POWER, Agent. Office—Palace Building, 152 Main St., Ventura, California.

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Surveying, Architecture, Drawing and Assaying.  
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Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. Established 1864. Send for Circular.

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Are now offered for sale in lots of from 5 TO 40 ACRES. This is the most fertile body of land ever placed on the market, and is located in the FINEST FRUIT SECTION IN THE STATE. It is a living testimonial of the varied fruit and cereal productions that can be grown in the State.

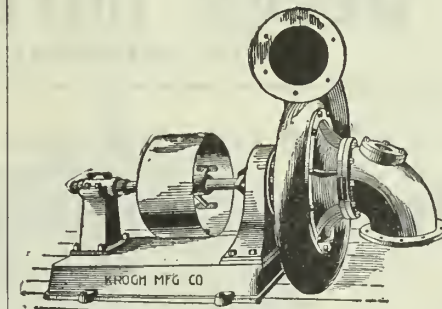
Read What Can Be Grown on This Land

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The book has been practically rewritten by the author, and contains the latest and best methods of practice on the subjects of which it treats.

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## DEWEY, STRONG & Co., PATENT SOLICITORS,

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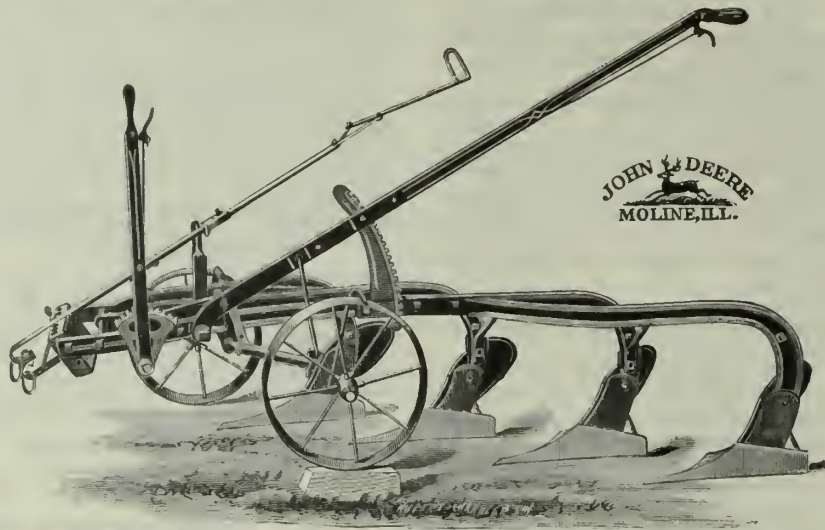
Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced first-class agency. We have able and trustworthy associates and agents in Washington and the capital cities of the principal nations of the world. In connection with our scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us to give advice which will save inventors the expense of applying for patents upon inventions which are not new. Circulars and advice sent free on receipt of postage. Address DEWEY, STRONG & CO., Patent Agents, 330 Market St., San Francisco, Cal.





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HEAVY BEAMS.  
SPRING LIFT.  
LEVER DRAFT.



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THE STANDARD  
OF QUALITY  
FOR GANGS.

NEW DEAL 2-3-4-5 GANG. STEEL OR CHILLED BOTTOMS.

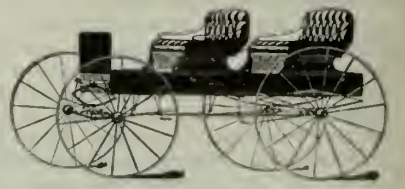
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BUGGIES  
-AND-  
CARRIAGES.



Spring Wagons  
-AND-  
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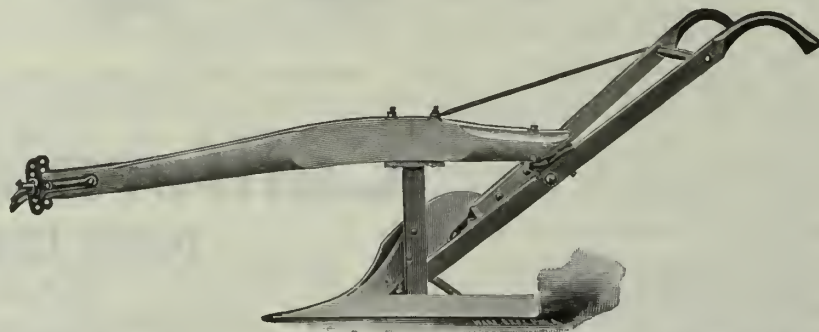
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SAN FRANCISCO, CAL.

Warehouse:  
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—WRITE FOR OUR NEW CIRCULAR OF PLOWS—  
MANUFACTURED BY  
**BENICIA AGRICULTURAL WORKS,**  
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NEW IMPLEMENTS  
AT  
NEW PRICES  
FOR  
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HARVESTING MACHINERY  
...AND...  
HAY TOOLS.

SINGLE  
ROAD  
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# PLOWS!

STEEL AND CHILLED.

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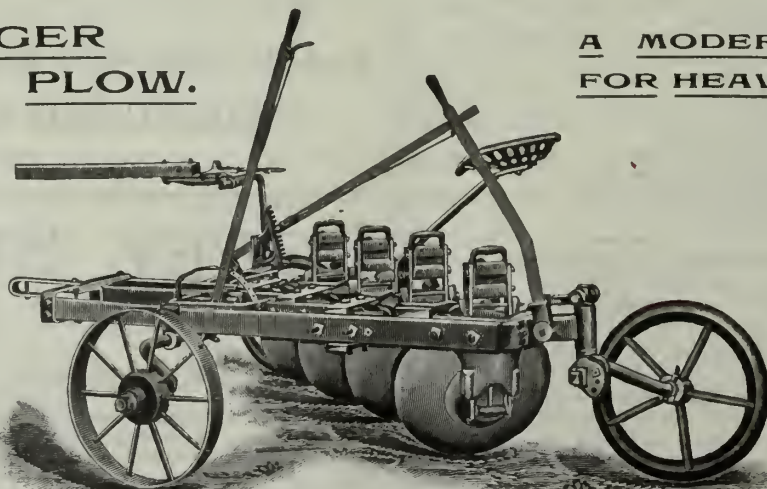
A MODERN PLOW  
FOR HEAVY WORK.

"No SCOUR No PLOW."

TIGER PLOWS ALWAYS SCOUR.

DISCS ARE SELF-SHARPENING.

HARDER THE SOIL BETTER THE WORK.



CUTS, PULVERIZES AND  
COVERS PERFECTLY ALWAYS.

BEAUTIFUL SEED BED.

SAVES ONE HARROWING.

**BAKER & HAMILTON,**  
SALES AGENTS,



# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 16.

SAN FRANCISCO, SATURDAY, OCTOBER 20, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

### Asiatic Varieties of Oranges.

Some time ago, while taking a glance at the varieties of oranges chiefly grown in California, we promised a future reference to varieties of Asiatic origin, which constitute a fraction of our commercial product. It is true that the fraction is exceedingly small and it is very doubtful whether it would be profitable to enlarge it, and yet it is a matter of pomological interest to know what these varieties are. All these varieties belong to the species *Citrus aurantium nobilis*, while the oranges chiefly grown in this State belong to the species *Citrus aurantium dulcis*. One of the most obvious characteristics of the Asiatic species is the loose skin, which can be readily removed without starting juice, this fact giving rise to the term "kid-glove oranges," which will apply to any of the class. The varieties are of dwarf habit and this is promoted by growing them upon the *Citrus trifoliata* or hardy deciduous of Asia. Better size of tree is obtained by working on the



Tangierine—Fruit and Foliage.

sweet orange stock, and this has for some time been proposed for the purpose of escaping the bushes, which are not acceptable to the California fruit grower, who wants a tree of some bearing space and not a garden plant. The largest of the Asiatics, the Unshiu or Satsuma, has been discussed as a variety fitted to produce an earlier ripening fruit, to get a fruit which would come in advance of the Navel. A certain quantity of the fruit



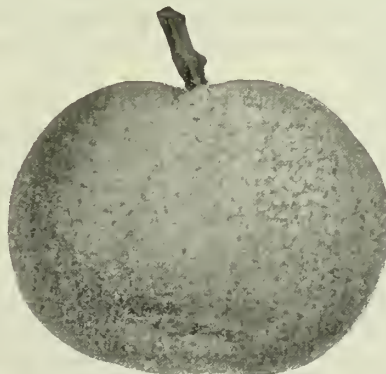
Seedling Tangierine Grown by A. Scott Chapman, San Gabriel.

does sell well, but it is quite a question as to how much expansion can be profitably undertaken. We are indebted to the excellent report of Mr. B. M. Lelong of the State Board of Horticulture for the accompanying figures, which show at a glance the prominent varieties of the Mandarin and Tangierine groups which can be found in California orchards. Mr.

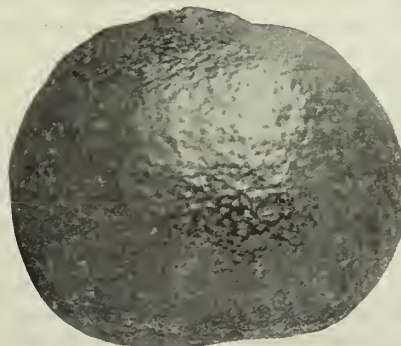
A. Scott Chapman of San Gabriel has long been a producer of these fruits. A leading engraving shows one of Mr. Chapman's seedling Tangierine trees. The Broad-Leaf Mandarin, of which the fruit is only ornamental, is a good grower and takes quite a satisfactory low standard form. The Dancy is perhaps the best known of the Tangierine class and is medium-sized and quite symmetrical and the tree rather an upright grower. The King is a Mandarin which has never achieved much popularity. The Kinneloa is named for the home place of Hon. Abbot Kinney of Los Angeles county. The Willow-Leaf Mandarin and the Stevens are of little note.



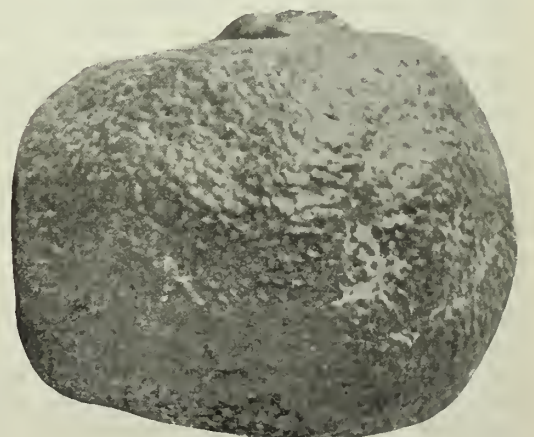
Broad-Leaf Mandarin.



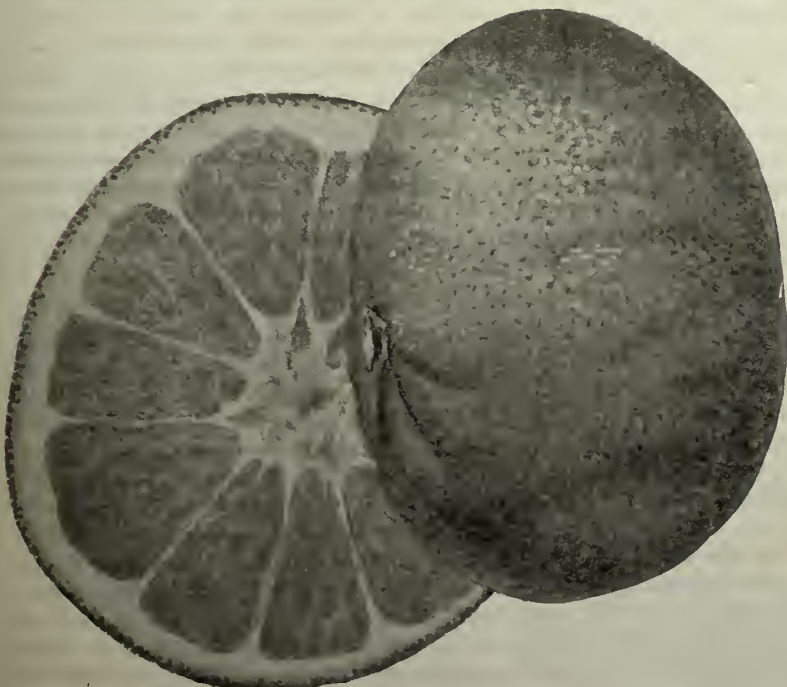
Willow-Leaf Mandarin.



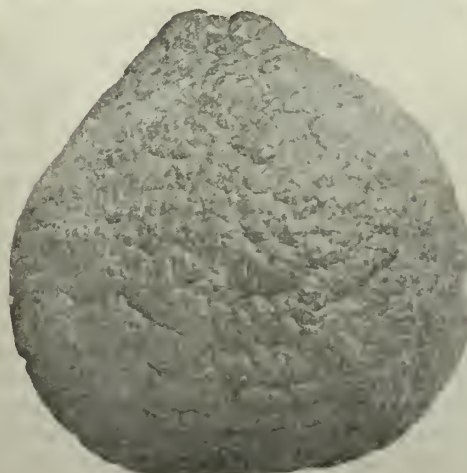
Dancy—Tangierine.



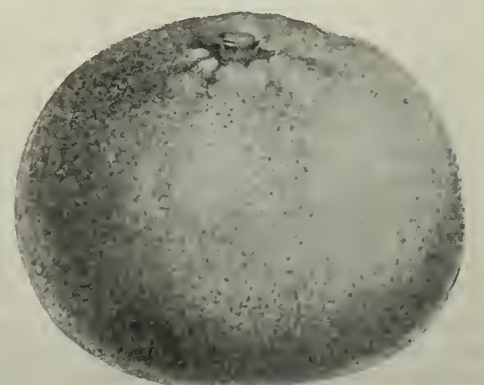
Kinneloa—Mandarin.



Satsuma or Unshiu.



King—Mandarin.



Stevens.



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E. J. WICKSON..... Horticultural Editor.

San Francisco, October 20, 1900.

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## The Week.

We have had another stretch of the finest possible days, giving a good chance to gather in the late grapes, which are of high value this year and count up fast on the right side of the ledger. The work for the coming season has proceeded well in localities where plowing was feasible, and a good start is thus secured toward a great year, if the rains decree it. Election issues this year seem to be very mildly drawn and do not interfere with either work or recreation. The impression seems to prevail that the country is all right and does not need saving this time. It is not well to take a presidential election too easy. If you have convictions, go in for them to the best of your ability. Republics are in greatest danger when the people become listless. We would rather see a good, lively campaign right up to election eve, and then we know that the country is all right. There is still a couple of weeks to get warmed up, so pull off your coats and go to work in support of your convictions.

Wheat has been hammered out pretty flat this week, and there has come a decline of 50 cents per ton on spot and more on futures. Eastern centers are soft and European mixed, and the local buyers are making the best of it. The result is that very little is doing, though 5000 tons did manage to escape for Europe. Barley has also had an off week, but is recovering notably as we go to press. There is now a better tone. Two cargoes—6000 tons—have gone abroad. Oats are still strong, owing to the war demand, and corn is scarce and high. Hay is very firm; prices are no higher, but there is a sharp demand and receipts are smaller. Both Germany and the United States are shipping for China from this port. Bran is quiet and a trifle easier. Beef is unchanged, as also is mutton, except that some fine, small sheep are going for lamb and sell higher. Hogs are off  $\frac{1}{4}$  cent here, in sympathy with a drop at the East. Butter is quiet and weak, owing to large amounts coming out of cold storage. Cheese is firm for new mild and steady for older. Eggs are very stiff for select lots of fresh; others are unchanged, as there is plenty of Eastern and local cold storage. The poultry market is flattened under the weight of seven carloads of Eastern within three days. Fine apples are selling well but common are in excess. There are too many poor grapes; but fine grapes sell well and wine grapes are sought for. Dried fruit packers are listless buyers just now, as they are rushed in filling orders of assorted cars from stock already in their hands. Eastern orders are impatient. Prunes outside the

combination are said to be going a little under fixed rates, but there may not be many of them. Raisins are in good demand—seedless hard to get at advances. Potatoes are soft under free arrivals, and onions are fairly steady. Beans, especially white, are better under Eastern demand. Wool is unchanged and hops held above buyers' views. Walnuts are moving rapidly at fixed prices.

No one who participated in the establishment of any of the colony enterprises which have developed into our leading fruit centers would part with the delights of memory of those early experiences. The pioneers at Riverside, at Pasadena, at Fresno and other now famous places, will never forget the gladness, the confidence, the keen interest, which were characteristic of their beginnings. What a pleasure to have come; what wonderful achievements in so brief a time; what confidence in the future—all these exclamations are as clear to our ears, as we saw the beginnings of our best known fruit districts, as though we heard them but yesterday. We are often reminded of these things, as their similitudes are reproduced at the present time in newer parts of the State. We believe it is well to recall the old scenes and to rejoice that California is still seeing them reenacted. It is a renewal of youth in the State—a revival of courage, an assurance of new achievements, a promise that the future has still greater things to be attained. The thought is suggested by an account of a celebration last week at Maywood Colony in Tehama county, arranged to signalize the second annual meeting of the co-operative fruit association of the colony. There was a great time, to be sure. About 1700 meals were served of barbecued meats and indescribable fixings on beautifully decorated tables in the large drying houses of the association. The Woman's Club dispensed the bounty. Besides the feast there were volumes of music and oratory, brazen and otherwise, games in variety, and many other things calculated to entertain and delight. In short, the colonists had planned to make a great day of it, and they notably succeeded. We are prone to rejoice with them and to join in the fervent wish that all the advancement and prosperity which they anticipate for their region may be realized.

Readers write us of the failure of many of the district fairs as exhibits of farm, orchard and vineyard products. They claim that the live stock element monopolizes the attention of the managers, and of the live stock interests the racing is the chief part. One reader writes us quite in detail, showing that at one of our leading district fairs he was the only exhibitor in a horticultural line, although the city in which the fair was held is one of the chief fruit centers in the State, and that the \$3600 derived from the State went almost entirely to the support of various sporting and fancy stock affairs. We have no doubt of the facts. It has been largely that way in many of the districts for the last quarter of a century, and it has been growing worse. We have preached ourselves tired about it, and there seems so be no more occasion for preaching. The agricultural producers have it in their power to change the policy and attitude of our district fairs, and they are the only ones who have such power. If these producers will, through their various associations, not only resolve but act aggressively, they can give the fairs about any shape they think best, and they can shape the management of the exhibitions. But they do not seem to have any very strong convictions on the subject. Many of them like a horse race better than they like a pavilion show of produce, and by doing nothing they secure what they like best. It is not a high order of display which is secured, we admit, and it does very little, indeed, for the building up of the community, but so long as the community does not act in its own behalf in other directions, or so long as the community is pleased with what is done, there will be no change. There is no use scolding about it. Our farmers can change the whole thing by action when they desire, and until then it will not change.

We are deeply grieved to learn of the death of Col. J. B. Armstrong of Cloverdale, who a decade ago was one of the most active citizens of his county in all progressive works. He has lain for seven years an invalid hopeless of regaining strength, and yet constantly active in his interest in the busy world

around him. We are glad to know that his continued touch with the progress of California agriculture, which he secured by the aid of the PACIFIC RURAL PRESS, was a matter of much cheer and satisfaction to him. Col. Armstrong was an Ohioan, a veteran of the war and a staunch supporter of all that makes for the industrial progress of his adopted State. He was owner of a splendid tract of redwood forest near Guerneville, which he had planned to give to the State for the promotion of the science and art of forestry which he fondly loved. We had hoped that his name might have been kept ever green by the perpetual forest which would bear it. It would have been a fitting monument to his worth.

If we had had our prophetic eye uncovered last spring, we would have advised our readers to grow more broom corn. This crop seems to be rather short everywhere, and it is apparently shorter in Oakland, where the State has its broom factory for adult blind people, than anywhere else. In fact, the State factory has to keep its blind people idle for a time because it can get no corn for them of which to make brooms. Besides, the broom-corn dealers have set up a corner against the State. At the meeting of the directors of the factory this week, the contract for broom supplies was not let, as all of the bids which were presented were considered very high. Two weeks ago in open market broom stuff was quoted at from \$70 to \$90 a ton. The bids made in answer to the State's advertisement were not lower than \$125 a ton, and some ran as high as \$185. This sudden change in the market was not considered to be exactly straight by the directors, who are thinking that the bidders take advantage of them, knowing that it will be impossible for the institution to go out in the open market and buy at market prices. Notwithstanding this experience, the directors think they will be able to secure supplies at a reasonable figure in a short time and start the factory by the middle of November.

They are having trouble in Michigan over the beet sugar bounty law which was passed in 1897 and gave growers of the sugar beet 1 cent a pound. There is due the nine companies operating in the State \$300,000. The State Auditor refused to pay the money and the court sustained the Auditor, holding that the law "is void whether it comes within any of the express provisions of the Constitution or not; it is not law, but an act which attempts to take the property of one citizen and turn it over to another; to compel one class to donate a part of its property to another. There is no claim here, nor can any be made, that these taxes thus imposed under the act are for any public use, nor could the State itself carry on such a business." The beet sugar factory managers say the decision will stop further factory building in that State.

It is a very interesting fact that some of the early forecasts of the census returns of 1900 reveal the encouraging fact that the drift of the people to the cities has been, in a measure, checked. The tide is doubtless "on the turn." We learn that in 155 of the largest cities of the Union the aggregate increase has been a fraction less than the average increase of the country; while in the census reports of the years 1870, 1880 and 1890 the increase of population in the cities was so far ahead of the general average, which was about 25%, as to excite no little alarm in the minds of political economists, sociologists and philanthropists. These facts were very effectively used by Rev. C. E. Rich, one of the speakers at the Maywood Colony celebration, to which we have already alluded.

The Germans are still active buyers of army supplies and are shipping volumes of stuff from this port. One day this week the German transport Bosnia left for China with 1100 horses and mules. She is the largest transport which has ever left this port. The next German transport to leave for China will be the Verona, which is now loading, and she in turn will be followed by the steamer Frankfort. The practice of the German Government in shipping all its stores to China from this port is materially increasing the volume of trade. William shows his good sense in selecting his war machines. California mules loaded with California hay and oats are just the things to break down the great wall of China. They are rapid-fire guns.



QUERIES AND REPLIES.

Tarweed-Grindelia.

TO THE EDITOR:—Being an old subscriber and a careful reader of your valuable paper, I was much interested in the article in the issue of the 22nd inst. concerning the sale of tarweed, or grindelia, by John Olvey and J. W. Thomson of Colusa. I would be pleased to learn who are the consignees and if there is any further demand for the commodity.—J. C. HOBSON, Healdsburg.

TO THE EDITOR:—Can you tell me if the weed commonly known as tarweed is valuable for medicinal purposes? If so, how should it be prepared and what is its value?—P. F. VANDIVEER, Dos Palos.

Tarweed is a very indefinite term and is apt to be used in California as a name of any sticky plant. The better common name of the grindelia robusta is "gum plant," for it is not one of the plants properly called tar weeds. There are several species of grindelia on this coast, and possibly they all have similar medicinal merits. The one which has commercial value is grindelia robusta, which has achieved some reputation as a remedy for poison oak poisoning, and is used by some medicine manufacturers in San Francisco whose names we do not know. It has also been used by herbalists for fevers and other troubles. Probably the amount required is not large, and the consumers have no trouble in getting their supplies where the exact species they desire are most abundant. So far as we know, there are no tarweeds that are worth having, either alive or dead.

Pruning.

TO THE EDITOR:—The many valuable answers to queries in your paper leads me to ask you, When is the best time to prune peach, apricot and prune trees, and also vineyard? I am now ready to go at it. Is it safe or too early?—A SUBSCRIBER.

It is now so late that all the trees you mention can be pruned without injury, except possibly some very late peaches which may still be in too active growth. As soon as the season's growth is practically completed and the foliage becoming limp, it is safe to prune even though the leaves may not actually have fallen, and it is often a great advantage to do much of the pruning now rather than in the winter. There is, however, one consideration which has to be held in mind. The early fall pruning induces earlier activity in the plant in the spring, and where vines or apricots are disposed to start very early and encounter frosts they may sometimes escape this danger by late winter pruning, which induces a little later activity. There has been no accurate measure of the effect of early pruning in this respect, but it is known to be of some moment, especially with grape vines.

Olives Recovering.

TO THE EDITOR:—In response to your request, I forward with pleasure two branches from two affected olive trees. The shorter branch, as I send it, has a number of leaves on, but they have lost their glossy appearance and show signs of sickness. Acting on the principle that the trees have been planted too deep, during the summer I pulled the dirt away from the crown of the tree, and almost every tree has since put out fresh growth almost, and, in some cases, entirely to the end of the twigs, thus apparently giving support to that idea.—R. G., San Diego.

These trees were described at length by our correspondent in our issue of September 29. The specimens received show no signs of disease. The bark is clean and the dormant buds normal. Where the twig has died toward the end, it seems clearly to be due to lack of sap. The trouble apparently lies in the root, and it has been remedied, as our correspondent says, by restoration of normal root action. We still doubt that deep planting was the cause, but, rather, that some other peculiar condition which has widely prevailed at the south and which has caused so many trees to fail to make natural growth, has affected them. They are apparently recovering from the adverse conditions.

Unfermented Wine.

TO THE EDITOR:—Will you please give the formula for preventing grape juice from fermenting?—B. W. T., Solano county.

It is possible to prevent fermentation by the use of antiseptics, but these are unwholesome and generally condemned by health experts. Some of the "communion wine" used in this State is really a medical preparation and should be used only under the advice of a competent physician, if at all. The right way to

prevent fermentation is to kill the germs by heat and then make it impossible for them to re-enter. This is not a matter which can be explained in a word or two, and it is not necessary for us to try it, because there has just been published at the University Experiment Station at Berkeley a bulletin entitled "Presentation of Unfermented Grape-Must," by Messrs. Bioletti and Dal Piaz, which any one can obtain free by writing to Dr. Hilgard, director of the station.

Musty Eggs.

TO THE EDITOR:—Can you tell me why my hens are laying eggs so musty tasting (especially the yolk) that we can not eat them? About four weeks ago I bought a sack of bone meal and have kept a pan of that where they can run to it, and thought that might be the cause. I am feeding wheat screenings, with an occasional (about every two weeks) dose of oil of sassafras for lice.—FARMER, Willows.

Presumably the trouble is in the feed. We should not use bone meal in the way you do. It is very apt to decompose and take on very disagreeable odors, and would not then be a wholesome food. It is possible that your wheat screenings is full of some pungent weed seed, and, last of all, your sassafras oil is also calculated to affect the flavor of the egg, and we do not see how it would make any trouble for the lice. Change your feed, avoid whatever has strong odors and flavors, and see if the trouble does not disappear.

Strawberry Barrel.

TO THE EDITOR:—Can you give me directions for making a strawberry bed in a hogshead, how to prepare the earth, and the best variety to plant?—FARMER, Willows.

Bore an inch hole in what is to be the bottom and bore 1½-inch holes about 8 inches apart around the cask and from bottom to top. Make a good mixture of loam and well-rotted manure. Fill up to the level of the lowest row of holes. Put a plant in each hole, spreading the roots over the soil inside, and fill up to the next row, and so on to the top. The root crown of the plants should lie just at the hole, neither inside nor outside. Any variety of strawberry which does well with you will answer. The Arizona Everbearing will stand more varying conditions than any other variety we know of, and is a fine, free grower.

Phosphorus Poison for Squirrels.

TO THE EDITOR:—Will you please print a good formula for mixing wheat and phosphorus for squirrel poisoning?—READER, Clayton.

The use of the cyanide and strychnine formula, which we have several times published recently, has largely displaced phosphorus poison, but if the latter is wanted, here it is: To 100 pounds of wheat take nine gallons of water, one pound of phosphorus, one pound of sugar, one ounce of oil of rhodium. Heat the water, sugar and phosphorus to the boiling point and stir in the wheat and let it stand till cold, then stir in a little flour to take up surplus moisture.

Egg of Katydid.

TO THE EDITOR:—Enclosed I send a twig from my prune orchard in Shasta county. Are the parasites attached of any significance, and, if so, how can I destroy them? They are not numerous, so far as observed yet.—READER, San Francisco.

The peculiar, seedlike bodies are the eggs of the katydid. They are frequently under suspicion as some new kind of a scale insect, but, fortunately, they are practically harmless. The katydid is one of the grasshopper family, famous for its shrill cry, but never abundant enough to do any particular harm.

Hogs on Ten Acres.

TO THE EDITOR:—Would it be profitable to raise hogs on a ten-acre tract, irrigated by pumping? What proportion of land should be put in alfalfa, roots, etc., in order to grow all feed at home? About how many hogs could be raised in a year on such a place?—READER, San Juan.

TO THE EDITOR:—Whether it would be profitable to raise hogs on a ten-acre tract would depend on the amount of knowledge that the man has of the business. Any one who has a practical knowledge of swine raising could make it profitable. If you have had no experience in hog raising buy a trio of hogs—one boar and two sows—and commence and grow up with the business, and you will soon find out how many hogs your ten-acre tract will keep. I would say five acres alfalfa and three acres of beets would be a good division, the beets taking the place of the

alfalfa in the cooler months of winter. The number of hogs that could be raised in a year on such a place would depend on the character of the soil. To make it profitable, other foods should be used with the alfalfa. Wheat middlings or bran is good, and skim milk can be made worth 12 cents per hundred pounds when fed in connection with alfalfa. Hogs require a variety of feed and do not grow and thrive on grass alone. The grass can be made worth more when fed with other foods. Ground barley or wheat moistened and fed with grass to hogs makes profitable feed.—ELIAS GALLUP, Hanford.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending October 15, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

COAST AND BAY SECTIONS.

Generally favorable weather has prevailed during the week. Light rain has fallen in some sections. Nearly all crops subject to damage were under cover, and the injury to late grapes by the rain of last week was less than expected. Fruit drying is nearly completed, and most of the raisin crop is cured and under shelter. Muscat grapes are plentiful and of excellent quality. Beans were not seriously damaged by rain, and threshing is nearly completed. The soil is in excellent condition, and farmers are plowing and seeding. A large acreage of grain will be sown. Rain has given grass a good start, and pasturage is becoming plentiful. Stock are in good condition.

SACRAMENTO VALLEY.

Warm weather and drying winds, following the rain of last week, has been of great benefit to raisin and prune growers. Light showers have fallen during the week in some sections. It is reported that raisins and prunes were but little damaged by rain, and in some places no damage was done. Oranges look well, and give indications of a heavy crop. In Sacramento county it is reported that the yield of grapes for the season is more than average and that the quality is superior. The recent rains were very beneficial in starting volunteer grain and grass and in softening the soil for plowing. Pasturage is becoming more plentiful. Seeding summer-fallow is progressing. The observer at Oroville reports that there is considerable snow in the mountains.

SAN JOAQUIN VALLEY.

The weather during the past week has been generally clear, with pleasant days and cool nights. Fruit drying has been somewhat retarded, owing to the cool weather. The second crop of grapes is generally going to the wineries. Pasturage is good and stock are doing well. Farmers are preparing for plowing and some has already been done. Dried fruit is generally going to the packing-houses and very light shipments of grain are being made. Citrus fruits are progressing favorably. Indications are that a large acreage of wheat will be sown this season. Seeding of summer-fallow is in progress in some sections.

SOUTHERN CALIFORNIA.

The weather has been generally cloudy, and unfavorable for fruit drying and raisin making. Light rain has fallen in some sections, the precipitation at Los Angeles amounting to 0.24 inch. Walnut picking progresses slowly, the nuts being hard to husk, owing to continued dry winds. Walnuts are of good quality, and in Orange county the yield will be about the same as last season's. Oranges continue in excellent condition and are maturing rapidly. In the vicinity of Redlands a number of orange trees are in bloom—a rare phenomenon at this season.

LOS ANGELES SUMMARY.—Generally cloudy, threatening weather. Rain on the 13th was unfavorable for fruit drying; damage slight. Outlook for oranges is good. Walnut harvest beginning; promising well.

EUREKA SUMMARY.—Potato digging is nearly completed; crop much below average. The soil is in good condition. Pasturage advancing rapidly.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Oct. 17, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week	Total Seasonal Rainfall to Date	Total Seasonal Rainfall Last Year to Same Date	Average Seasonal Rainfall to Date	Minimum Temperature for the Week	Maximum Temperature for the Week
Eureka.....	.00	1.73	2.24	2.61	44	60
Red Bluff.....	.04	2.05	2.54	1.41	50	82
San Francisco.....	T	.68	1.40	.73	50	86
San Francisco.....	.03	1.14	1.53	1.07	48	72
Fresno.....	.00	.42	1.22	.69	50	92
Independence.....	.01	.82	.37	.63	46	78
San Luis Obispo.....	.11	1.31	1.62	1.27	48	82
Los Angeles.....	.10	.10	1.40	.72	52	78
San Diego.....	T	.08	.42	.35	56	70
Yuma.....	.00	.02	.08	.85	54	96

"FARMER," of Willows, Glenn county, appreciatively writes: "Every issue of the PACIFIC RURAL PRESS has something of value to us which we appreciate."



## SHEEP AND WOOL.

### The Present Condition of Sheep Husbandry.

It is very timely, in view of the active interest in flock interests, that a careful review should be made of our present condition, and such a showing has just been published by the U. S. Department of Agriculture, as specially prepared by Mr. J. R. Dodge, whom our readers will recognize as an old and tried authority in such matters. He states facts which will be gratifying to all Americans and encouraging to those who believe in progressive work with sheep.

The flocks of the United States do not aggregate so large a number of sheep as in 1893, or in 1884, but they are increasing rapidly, and bid fair to exceed before many seasons the highest former figures. They include a greater variety than at any former period. If manufacturers desire a selection from all the wools in the world, they can get all varieties of much value without going out of the country. That this is no idle boast can readily be proved in our principal wool markets.

**OUR VARIETY IN WOOL PRODUCTION.**—In collecting the wool exhibit for the Paris Exposition of 1900 the writer was impressed with the wonderful progress that has been made in diversification of breeds and qualities of wool. The same skillful and patient work that resulted in the differentiation of the old Spanish Merino, giving the world the French, Saxon, Silesian and American Merinos, has been continued with the latter in the Delaine and Black Top families (or breeds), with heavier bodies, longer fiber and more valuable fleece for the finer combing fabrics so much in demand for the fashionable tissues for ladies' and children's wear. The Lincolns, that have played so important a part in the recent breeding of Australia and South America, are here in force and can be produced in any quantity desired, answering the demand for lustrous combing wools.

The wool exhibits now on exhibition at Paris include samples of nearly all breeds and grades of our domestic wool. They fill twenty-one sections, each covered with plate glass 5 feet in height by 3 in width. Thirteen of these show whole fleeces, twelve in each, from the wool dealers in the two great markets, Boston and Philadelphia, illustrating the various qualities and commercial classifications of American wools. Seven section cases are filled with samples from breeders of nearly all the breeds, samples of eighty-four fleeces from the farming States, the mountain ranges and the Pacific coast.

These exhibits will give the people of other countries an idea of the great variety and high character of American wools, and illustrate attainments in breeding that leave little necessity for importing either sheep or wool. There are very few breeds of the world worth importing that are not already here, and being improved rather than deteriorating. Our climates and grasses furnish sufficient diversity and variety to meet all requirements.

From Maine to Texas, from Alaska to Arizona, are found conditions of temperature, humidity and pasturage comparatively free from extremes of drought such as have destroyed sheep by thousands in Australia and Argentina, and favorable to great variety and high quality of American wools.

**THE PRESENT FEELING.**—The general feeling at the present time as to the condition and prospects of sheep husbandry is one of relative content and satisfaction, and of confidence and hopefulness for the future. If all growers are not equally suited and satisfied, they are at least measurably content with the situation. The one thing that they dread is a violent change of conditions. In a country that is continental in extent conditions cannot be equally favorable in all sections. There are differences in climate, some districts requiring feed and shelter all winter, others needing neither at any time, except in severe storms that may or may not occur during an entire winter. Some sections have limited pasturage, required imperatively for other kinds of stock; others have broad prairies or wide stretches of free range.

Western competition has borne heavily on the seaboard States in this as in other branches of animal industry. The effect has been the movement of live stock industries westward for the past fifty years.

There is a feeling now, among those having former experience, that there may be profit in sheep again for the production of fat lambs, but whether it will lead to increase of flocks is uncertain. With skill and enterprise it might prove so.

The conditions in the Middle States are essentially the same as those of the Eastern. The decline in the number of sheep has been progressive, decade by decade, without break, except in Pennsylvania, where in 1870 and 1880 increase was shown, owing to prominence of the Panhandle counties in wool growing in that period of general prosperity. The decline from 1850 to 1890 was small in Pennsylvania. It was continuous in New Jersey, though there were only 160,488 in 1850; but in New York the falling off was from 3,453,241 in 1850 to 1,523,979 in 1890, and in the last ten years the reduction has been almost half the figures for 1890. Now there are only about a third

as many in the Middle States as in 1850—a few breeding flocks, some held for raising spring lambs, and scattered farm flocks.

The Southern States, exclusive of Texas, had between 5,000,000 and 6,000,000 sheep in 1850, and there have been only slight fluctuations since, the census of 1890 showing 5,000,000. The South has never been a wool growing region. Its present opportunity is in feeding lambs and muttons, for which great natural resources are enjoyed—a mild climate that requires little if any shelter and permits the growth of forage all winter, while its cotton seed is a valuable and abundant element of feeding rations. Its population furnishes an extensive market for meats, in which a high quality of mutton, as well as beef, is now scarce.

Throughout the West a buoyant feeling exists among sheep raisers, and numbers are increasing with considerable rapidity, especially in the valleys of the Mississippi and Missouri. The impulse of growth is felt in all the States of the Ohio valley.

There is rapid increase of flocks in the prairie States west of the Mississippi. Iowa is perhaps more interested in sheep husbandry than ever before. Sheep are increasing quite rapidly in Minnesota and the Dakotas, and numbers are now greater than at any former period. The feeling is general that under present conditions sheep should prove fully as profitable as any other branch of stock raising.

The region west of the prairies, the range country, including Texas and the Pacific coast, is the principal area of American wool growing. In all this region the industry is now flourishing. Sheep are increasing, the flock masters have the confidence and courage to extend operations, use their time and money in efforts for breed improvement, and give the care and attention to details necessary for the permanent welfare of flocks. Everywhere they appear to be content with the situation.

Advices from Montana and Wyoming, where sheep are counted by millions, and valued as never before, the total value of the flocks of the former being greater than that of any other State, and of the latter only exceeded by that of Ohio, declare a condition of prosperity and contentment. Similar conditions are reported in Utah and Idaho.

New Mexico is credited with the largest number of any State or Territory. The Department of Agriculture estimates 3,397,439, and Governor Otero estimates last year's product of wool at over 18,000,000 pounds, and declares that sheep husbandry is now the most prosperous industry in the Territory and flock masters are in better spirits than for many years. Many years have been occupied in breeding up the coarse-wooled Mexican stock to the Merino plane, yet the wool is still uneven, some fleeces comparing favorably with any in the United States, while the majority are not uniform in grade, running from fine to blanket wool; but each succeeding year the lambs produce a finer grade of wool.

The industry is also quite prosperous in Arizona, and sheep are increasing rapidly.

The secretary of the National Merino Sheep Register Association of California, Mr. R. O. Logan, says that wool growers are generally jubilant over present prospects, over the return of a fine wool period, feeling that the tendency of the next decade will be toward the growing of merino wool of long staple. The only serious drawback indicated is the introduction of skirted wools at the rate of unwashed, which reduces materially the protective benefit of the duty.

Oregon and Washington flocks are increasing in numbers, giving a reasonable profit to flock owners and a measure of satisfaction and contentment.

**INCREASED VALUE OF SHEEP.**—The present condition of wool growing has no more suggestive index than the average prices of January last. In the twelve States and Territories which now produce nearly two-thirds of all our wool the prices of sheep are higher in every one than in January, 1893. In Oregon, Wyoming and New Mexico the average price was more than double that of 1895, and for all of them together the average was little short of double, and the home price of wool has increased more than 100%. A comparison of January prices in 1893, 1895 and 1900 is as follows:

States and Territories.	1893.	1895.	1900.
Texas .....	\$1.60	\$1.21	\$1.92
Montana .....	2.58	1.51	2.84
Wyoming.....	2.75	1.64	3.51
Colorado.....	2.52	1.52	2.80
New Mexico.....	1.50	0.90	2.17
Arizona .....	2.25	1.21	2.34
Utah .....	2.38	1.47	2.49
Nevada.....	2.43	2.42	2.91
Idaho .....	2.50	1.41	2.80
Washington.....	2.83	1.74	3.13
Oregon .....	2.40	1.16	2.67
California .....	2.32	1.65	2.85

**WOOL AND WOOLENS.**—The data presented in this report show that this country produces wool suited to almost every variety of honest fabric that is made; that, excepting the lower grade of wools, domestic manufacture has at some dates had a nearly full supply; that in a very brief period a full supply of clothing and worsted wools can be reasonably expected. It has also been shown that our manufacturers can not be successful without a comparatively full supply of home-grown wools.

In conclusion, it has been fully demonstrated—and

needed not the bitter experience of 1894-1897 for emphasis—that the prosperity of manufacturers is inseparably bound up with that of the wool growers. A full supply of wool products for domestic consumption can easily be produced for a constantly increasing population, and ultimately some for exportation is possible, but never with foreign wool. In some lines even now foreign shipments of manufactures of wool are made, and they are increasing. During the fiscal year ended June 30, 1900, the value of exports of wool manufactures was \$1,253,602, against \$1,047,407 in the preceding fiscal year, largely in wearing apparel. This will increase if the prosperity of both industries is maintained.

## THE DAIRY.

### Improvement of Milk Delivered to Factories.

By GEO. A. SMITH of Los Angeles, at the recent Dairy Convention in Sacramento.

So much has been said and written upon this subject it would seem exhausted and that nothing new could be said about it, and that the care of milk was thoroughly and fully understood by all concerned, from the milker to the consumer. Whenever dairymen or creamerymen meet to discuss methods of improvement, no subject demands so much attention and meets with so much enthusiasm and interest as improvement in the care of milk. Therefore, in writing this paper I shall only touch upon its importance, the responsibility of patrons, and make a few suggestions as to how they should be educated. "How to care for milk" is so well understood by every creameryman, who is worthy of the name, that I will not treat it in this paper.

**GOOD MILK ESSENTIAL.**—All writers on the manufacture of dairy products begin by saying, first of all, that to have high grade goods the maker must have good milk. Every successful dairyman who sells milk to families in the cities will say his success lies in the care he gives his milk. The degree of success which a creamery attains, or which it may attain, depends very largely on the manner the milk it receives has been handled. The progressive and successful cheesemaker, who makes a uniform quality of high-grade cheese which always brings the top price, makes his cheese from milk that has been well and properly cared for. On the other hand, failure in any branch of dairying or in the manufacture of any dairy product is sure to follow improper, careless, slipshod handling of the milk, and if we thoroughly study the successes and failures in the manufactures of dairy products we can in nearly every case trace the principal cause to the care, or lack of care, of milk. The success of a creamery and the reputation of the butter maker will be very uncertain unless the milk it receives is well and carefully treated every day in the year.

**PRESERVATIVES NOT NECESSARY.**—In June of this year the city of Los Angeles passed an ordinance forbidding the use of any kind of preservative in milk or cream. At first the dairymen thought a great hardship had been imposed upon them and that it would be impossible to furnish their customers with milk and cream that would be satisfactory in keeping qualities, but by right methods in the handling their milk was much improved in every respect and they were able to give much better satisfaction, both to their trade and to themselves than ever before.

If what I have said be true—and I believe it is—then the proper care of milk from the time it is milked until received at the creamery is the most essential thing in the manufacture of high-class creamery butter.

**INFLUENCE OF A POOR PRODUCT.**—Probably one reason so much milk is delivered to creameries in bad condition is because patrons have never been shown that it is to their interest, and that it will pay them well, to bring their milk in prime condition, and that every time a creamery receives bad milk every patron, the owner and the butter maker are injured, because every batch of poor milk received affects the flavor of the butter, lessens its value, decreases the demand for that brand, and injures the reputation of the man who made it. Not alone do the patrons of that particular creamery suffer, but the patrons of every other creamery in the same section of the country are damaged, because the reputation of the butter of that locality is injured. No butter maker can make faultless butter where tainted and badly cared for milk is received, and if the management does not know enough to detect and refuse it, or manifest no anxiety or worry about it, or will not speak about it to the patron for fear of losing his patronage, and continues day after day receiving bad milk, he will soon find there is something decidedly wrong with his business. The patrons will be getting smaller checks and the butter maker will be looking for another job. We may also, and I think without any doubt, find one of the causes of some of our surplus butter in the filthy milk we receive at our creameries.

**SHOULD BE REJECTED.**—Another reason we receive so much bad milk is because we accept it and pay as



much for it as for good milk, which is evidently wrong, because in so doing we encourage the bad milk. We often do it because we are afraid of offending the patron and losing his patronage by refusing it, but I cannot agree with the creamery men who think thus, because if a patron's milk is not good he generally knows it, and he also knows that it is bad through his own careless, slipshod methods of handling, and if you insist in a firm but polite manner on having nothing but clean, good-flavored milk he will in nine cases out of ten take no offense and bring you his milk in good condition.

**DUTY OF THE BUTTER MAKER.**—As I write this paper I know I have been assigned one of the important subjects, if not the most important, with which the butter maker has to deal, and this is where there is most need of improvement in the whole process of butter making. In order to accomplish this improvement the butter maker must lead his patrons to take an interest in their part of the process. He must gain their respect, show them that he is intensely interested in his work, and that he is working for their good and watching their interests. He must appeal to their consciences and show them it is not right that all should suffer the neglect and carelessness of one. He must be vigilant and watchful at the weigh can and must be firm in his refusal to take milk that is unfit. He must make them fully and thoroughly understand how and why bad milk delivered by one patron is the cause of a financial loss to each. His milk may decrease the value of the entire production of that day and cause a loss to every patron. The patrons expect the butter maker to make a first-class article. He therefore has the right to expect them to furnish first-class milk, clean and free from taints and foul odors. He must teach them how milk generally becomes contaminated, the causes of the bad changes and how to avoid them in the most effective manner.

**WHAT IS BADNESS?**—Many patrons do not thoroughly understand the fundamental principles which should be observed in the delivery of good milk. Ignorance of these principles probably is as much the cause of bad milk as intentional neglect. Many patrons will promptly improve conditions when their dangers are pointed out to them. The time has come when milk need not be handled according to uncertain theories. Science has come in and enlightened us so we now can trace many effects to their causes and also avoid many objectionable conditions in milk by removing the causes that made them.

It is now a well known and established fact that souring, bad flavors, decomposition and putrefaction in milk are caused by minute, microscopic vegetable organisms called bacteria. Their study will become at once interesting, instructing and profitable to any one interested in the production or handling of milk. So much has been written about them and their action on milk that any one desiring to post himself can easily find plenty to read about them, and I think the patrons should be induced and encouraged to read up on this subject, so that they can more intelligently care for their milk. It is not necessary to go into details as to the effects produced by the numerous forms of bacteria. Some are very troublesome whenever they find their way into milk, producing disagreeable flavors whenever they are allowed to multiply therein. Patrons should be taught how to keep as many of these germs as possible out of the milk, and also how to retard their action and thereby deliver their milk in good condition. After the patron has learned something about bacteria and their action on milk, and finds they can not all be kept out, he naturally asks himself how the harmful action of those that do get in can be stopped. When he knows their source, how to avoid their getting into the milk and how to stop their action after they get in, he should be held wholly responsible, and he alone, for the condition of his milk. But, until the patrons have made some study and have obtained a more thorough and practicable knowledge of bacteria, butter makers must content themselves by giving instructions and laying down rules for the care of milk. But, without a more thorough knowledge of milk, the patron can not see the use of all the extra work you put upon him and will neglect some of the most important steps in the care of his milk, thereby rendering almost useless the other things he does that he happens to think of. The different steps in the care of milk may be compared to the parts of an engine; if one necessary part is weak, the strength and usefulness of the whole engine is impaired.

**EDUCATING PRODUCERS.**—If in giving instructions and laying down rules the butter maker can show the patron the whys and wherefores of each and every step, very much will have been done to secure a better quality of milk for our creameries. In fact, the whole thing resolves itself into a matter of training and educating the patrons on this too much neglected subject. One way to teach them would be to outline a talk, explaining and describing in detail each step in the care of milk, fully and clearly. Another good way to educate the patrons is to put reading matter treating on this subject into their hands. A great deal of this can be had for the asking from the Department of Agriculture at Washington. Farmers' Bulletin No. 63 treats this subject very exhaustively, and should be in the hands of every creamery patron. Creameries near each other should make a concerted

movement in this matter for the mutual benefit of themselves and their patrons. They should meet and formulate a definite plan of action and work in unison, for in this, as in other things, "in unison there is strength." They should secure and distribute literature; publish rules and instructions; hold meetings to instruct patrons; and, as aeration and cooling is the very best thing that can be done for milk, they should adopt some good aerator and cooler to be used by every patron, and make its use obligatory; but to do this each creamery must refuse to receive milk from patrons who quit other creameries because fault was found with their milk, or because they would not use the aerators and observe the rules and instructions.

**AERATION.**—The creameries, fifteen in number, comprising the Los Angeles Creamery Board of Trade, unanimously adopted the following resolutions:

**WHEREAS**, Butter made from aerated milk is vastly superior in quality and sells for a higher price than that made from milk not aerated. This has been amply proved by creameries in Holland, Denmark, Canada and the Elgin district, the butter made from aerated milk always bringing the highest market prices, while the butter made from the unaerated milk will often bring from 1 to 3 cents per pound less, and

**WHEREAS**, The price of milk depends on the price of butter, it will be to the advantage of the producers of milk to have their milk thoroughly aerated, and in the best possible condition, and we recommend that each and every patron use an aerator in the handling of the milk, thereby improving the quality of our butter, increasing the demand, and consequently bettering the price of milk. Therefore, be it

Resolved, That the Board of Trade Creameries pay 5 cents per 100 pounds more for milk aerated by some approved aerator than for milk not so aerated.

Furthermore, they have adopted an aerator, after having made a thorough investigation, which strains, aerates and cools the milk. Each patron is supplied with one at a small outlay and is obliged to use it; otherwise, his milk will not be received by any of the Board of Trade Creameries. So far, no patron has refused to use the aerator and follow the rules and instructions. This has made a decided improvement in the quality of milk delivered to our creameries and consequently improved the quality of our butter.

**PERSONAL EFFORT.**—But these things alone will not be sufficient. The butter maker who would have good milk must, instead of placing some cheap boy at the weighing platform, take his position there every morning himself, inspect every patron's milk, and in justice to all refuse to accept any and all milk that is unfit. This must be done without partiality, no matter who brings the faulty milk, for it is not right that all should suffer in pocket and reputation for the neglect and carelessness of a few. Of course it requires a great deal of tact, good judgment and common sense to do this, and there should be no doubt about its justice in the mind of the patron. By carrying out this plan the butter maker can best secure the interest of his patrons, command their honor and respect, and win a high reputation for himself and his goods.

## THE FIELD.

### California Beet Sugar Industry.

There has just been published by Congress a report on the beet sugar industry in the United States by Charles F. Saylor and Dr. H. W. Wiley of the Department of Agriculture. What these disinterested experts have to say about California progress in this line is of great local interest.

**CALIFORNIA'S POSITION.**—California has been manufacturing sugar from the beet for the last thirty-three years. She has the distinction of not only having the largest factory in the world, but the oldest factory in the United States manufacturing sugar from beets; and, when we consider the comparatively short time in which sugar has been commercially manufactured from beets, this puts California almost among the pioneers of the beet sugar industry.

Up to last year California had no serious competitor for the honor of being the leading State both in the number of factories and the amount of sugar manufactured; but Michigan's record last year jumped from one to nine factories, which gives her the lead of one over California in the number of factories in operation, although the combined output of the factories of California is still considerably larger than that of Michigan. [Recently the courts have cancelled the bounty under which the Michigan progress was made.—ED.]

California possesses conditions for growing sugar beets that are peculiarly her own. Her soil and moisture supply for growing a crop are different; in fact, it might be said that the conditions that obtain throughout are different from those prevailing where sugar beets are grown in other mountain States, such as New Mexico, Colorado and Utah, and radically different from the conditions that prevail in the Mississippi valley, Michigan and New York. In the first place, beet growing in California depends largely on a thorough saturation of the soil by rainfall prior

to and up to the time of planting. It is a peculiarity of these soils that, if they are so saturated, they have the power of conserving this moisture so that, with the aid of occasional light showers, they will produce a bountiful crop of sugar beets. Indeed, California will produce a bountiful crop without the aid of the showers, provided the soil is saturated in winter and the beet plants succeed in getting a good start. In the other mountain States sugar beets are grown almost entirely with the aid of irrigation, while but very few of those produced in California are grown by irrigation. In the Mississippi valley, Michigan, New York and other Eastern sections the growing of beets depends largely on the rainfall during their growing season.

Under right conditions California can probably grow a larger tonnage and produce a beet that will run higher in its average sugar content and purity than any other section of the country; but the trouble with California, demonstrated by the experience of the last four years, is that the beets are not at all a reliable crop in the State, especially in southern California. In this section for the last two years beets grown for some of the factories have yielded only a small part of a crop. One factory in 1898 had a campaign of only one week, followed with a campaign of only four or five weeks in 1899, while other factories in the southern section have only run from one-third to one-half their usual time. This droughty condition has affected all the factories in California for the last two or three years. It seems to grow less in effect as we approach the northern section of the State, but even here none of the factories have had anything like a good supply of beets such as they might have anticipated under favorable conditions. This situation, if it shall continue, is bound to affect seriously the reputation of southern California as a sugar beet section, unless the farmers shall devise means for furnishing moisture to their crops through irrigation.

**ALVARADO SUGAR COMPANY, ALVARADO, CAL.**—Taking up in detail the progress of the sugar industry in this State, we have first the Alameda Sugar Company of Alvarado. This is the pioneer plant in the United States for the manufacture of sugar from beets. This company and its progenitor have been making sugar out of beets at Alvarado for thirty-three years. The originator of the business was the elder Dyer of Alvarado, now retired on account of declining years. Through his enthusiasm and persistence the factory at Alvarado continued to make sugar out of beets in the face of all opposition, vicissitudes and adversity. The enterprise itself had to fight its way into public favor as a feasible proposition. The product had to run the gauntlet of all kinds of critics as to purity, quality and desirability. These questions have all been settled, one by one, as the beet sugar industry has established itself on its merits in this country.

In occasional publications the credit for this pioneer work is given to someone else, but it must not be forgotten that Mr. Dyer, through these early years, freely gave his money, energy and ability to the work of agitation and the building up of the beet sugar industry. He not only kept this factory going year after year, in spite of the odds against him, but in season and out of season he advocated the adaptability of California for producing sugar beets and manufacturing sugar. The history of subsequent events in the establishment of these eight large, successful sugar factories in California has proven the wisdom of his course. Through his recommendation and influence three of his sons and two of his nephews thoroughly educated themselves in the art and science of beet sugar making; also in factory designing and construction, and they are devoting their lives to this work. The Alvarado factory doubled its output in 1897, and the parties interested in it also organized and built the factory at Santa Maria later. The Alvarado factory now has a daily capacity of 900 tons. It harvested last year 3800 acres of beets and worked 36,739.9 tons. The farmers received for their beets an average of \$4.56. The factory produced during the campaign 3898½ tons of sugar.

**WESTERN BEET SUGAR COMPANY, WATSONVILLE, CAL.**—The Watsonville factory has been one of the most successfully operated factories on the Pacific coast. Its daily capacity is 1000 tons of beets, being the largest operated in the United States prior to the construction of the new factories which began work in 1899. Mr. Claus Spreckels of California, the well-known Hawaiian sugar planter and manufacturer, who early became interested in the beet sugar industry in the United States, and especially in the State of California, organized this company, being the chief capitalist in it, and built the factory about ten years ago. It was fortunately located, has always been able to secure a good supply of beets, and has made a successful record throughout its career. In 1898 Mr. Spreckels also organized the Spreckels Sugar Company, which built a mill near Salinas, Cal. Owing to the extensive capacity of the Salinas factory, and the impossibility of securing sufficient acreage for it the first season—1899—the beets for the Watsonville factory were taken to Salinas and worked up along with the beets raised in that locality. This left the Watsonville factory idle the past season. I understand the Watsonville factory has recently been transferred to the company at



Salinas; that both factories will be worked under the same management hereafter, and that, as soon as sufficient acreage can be worked up in Salinas valley to supply the factory there, the Watsonville factory will be put in operation again, working up the beets of its own territory.

**AMERICAN SUGAR COMPANY, CHINO, CAL.**—The Chino factory was the third in order of introduction into the State of California. The season of 1899, like the two preceding seasons, has been so dry that the farmers have not been able to produce sufficient beets to keep the factory running a full campaign. This factory has a capacity for working 750 tons of beets daily. The campaign this year commenced August 26. The slicing closed October 29, giving it a run of sixty-five days, about half of a full campaign. It averaged during this time about 725 tons of beets daily. While the tonnage per acre was not very large, the quality of the beets was quite superior, the average running over 16% of sugar in the beet. This is a remarkable showing, in view of the fact that most of the beets grown for the Chino factory are grown year after year on the same ground. The quality of the beets does not seem to deteriorate in any way, but it is very likely that this succession of beet crops is having an effect on the tonnage produced, although the shrinkage is usually attributed to drouth. I clip from the Sugar Beet Gazette of Chicago some very interesting items that paper secured from the management of the Chino factory, showing the quality of beets worked, the consumption of raw materials, and the production of the factory during the campaign, as follows:

The Chino, Cal., beet harvest was completed October 14. The sugar percentage was kept well up and continues remarkably high for this late date in the season. The work at the factory for the week ending October 11 was as follows:

RESULTS OF A WEEK'S WORK AT THE CHINO FACTORY.

Day of the week.	Tons Sliced.	Per cent sugar.	Bags sugar.
Thursday.....	707	17.6	2,278
Friday.....	789	17.9	2,090
Saturday.....	801	16.1	2,265
Sunday.....	377	19.3	1,625
Monday.....	729	18.4	2,005
Tuesday.....	634	17.5	1,035
Wednesday.....	789	15.7	2,700

The following are a few items of the campaign, kindly furnished us by the management:

Tons beets sliced.....	44,336
Pounds sugar produced.....	12,956,400
Paid for beets, over.....	\$225,000
Paid for labor.....	\$60,000
Men employed.....	350
Barrels oil used.....	50,000
Tons coke used.....	900
Tons lime rock used.....	9,000
Sugar bags used.....	129,664

Besides these materials, the factory used thousands of yards of filter cloths and other necessities in the work. There was some molasses from last year and several cars of raw sugar were also worked.

It is understood that the ownership of this factory, the factory at Oxnard and those at Grand Island and Norfolk, Neb., have all been merged into one company, and that in the future they will be known as properties of the American Beet Sugar Company. This company was organized by Henry T. Oxnard of New York City for the purpose of absorbing the above plants, all of which he was instrumental in organizing and building. It is also claimed that this company will build and locate other factories throughout the United States from time to time, the next one being at Rocky Ford, Colo., for 1900. Mr. Oxnard has been one of the most indefatigable organizers of the beet sugar industry in this country.

**LOS ALAMITOS SUGAR COMPANY, LOS ALAMITOS, CAL.**—The Los Alamitos factory was the fourth in the order of introduction in the State of California. In its construction and arrangement it is looked upon by manufacturers as a model in every way. It started out with a capacity of 350 tons of beets daily and began its first campaign in 1897. The section of country supplying this factory with beets prior to this year was a large sheep ranch, but its success the first year in securing beets from these new and untried lands was so pronounced that the factory was encouraged to go ahead and double its capacity, which it did, giving it capacity of 700 tons of beets daily. During the years 1898 and 1899 climatic conditions have been exceedingly unfavorable for raising sugar beets. The factory only secured enough beets in 1898 to run seven days, and during the past year the factory was in operation only twenty-one days. This has been a very discouraging experience, but in view of the fact that the whole of southern California has experienced during that time an unprecedented drouth, the managers of this factory are disposed to continue their efforts until normal conditions shall obtain once more. The factory succeeded in working about 11,000 tons of beets, from which they manufactured 1100 tons of sugar.

**CALIFORNIA BEET SUGAR & REFINING COMPANY, CROCKETT, CAL.**—The capacity of this factory is 1200 tons. Here, also, the supply of beets was limited on account of the drouth during the past growing season, and they were able to secure only about half the

usual supply. This company is organized for both refining and manufacturing purposes. It is the purpose of the company to manufacture sugar from sugar beets during the sugar beet campaign and to refine Hawaiian raw sugar during the rest of the season. This would seem to be a very good plan, inasmuch as the beet sugar factories are usually idle at least eight months in the year under the most favorable circumstances. It would seem to be a good business policy to have the capital invested in the factory employed the year round, the machinery being used in refining when it is not employed in manufacturing sugar. I understand that some other companies are considering the feasibility of adopting the same plan. This policy, however, should be kept in view in the construction and arrangement of the factory from the beginning.

**AMERICAN BEET SUGAR COMPANY, OXNARD, CAL.**—This factory was commenced in 1897 with a view to working in the campaign of 1898; but, owing to the drouth, the management decided to ship the beets to Chino and have them worked in the factory at that place. This year the factory made a short run, closing down October 27, the balance of its crop being worked up at Chino as in 1898. It seems that the rains retarded the harvesting operations; also, that it was difficult to secure labor sufficient to keep up with the demand of this factory for its daily run of beets, which is 2000 tons. It opened its campaign August 16. The total amount of beets raised and harvested for this factory was 101,000 tons, but about one-third of this amount was taken to Chino.

The Oxnard Courier makes the following detailed statement with reference to the amount of sugar produced, the beets worked and crude material used by this factory in 1899:

Tons beet sliced.....	63,712
Pounds of sugar produced.....	16,785,400
Amount paid for beets.....	\$439,000
Amount paid for labor.....	\$80,000
Men employed.....	500
Barrels of oil used.....	71,487
Tons coke used.....	902
Tons lime rock used.....	8,228
Sugar bags used.....	173,513

The plan by which this company proposes to regulate the price it is to pay farmers for beets for the season of 1900 is quite a departure from what has been the custom heretofore, and is as follows:

"They will pay for beets containing 12% of sugar \$3.25 per ton and 25 cents additional for every 1% of sugar above 12%. A beet containing 11½% of sugar is rated at 12%, one containing 12½% at 13%, etc. If for any cause the beets should run below 11½% sugar, a deduction of 50 cents per ton for every 1% of the deficiency will be made; but it is very rarely that beets run as low as this. The company will pay the freight from the railroad station nearest the farmer to Oxnard, thus putting the growers in all localities on an equal footing and permitting them to get the highest returns for their crop. The tests for the percentage of sugar are made at the factory for each load or from each car as delivered, and the farmers at Oxnard are allowed to employ a check chemist to verify these tests. The company will furnish the seed at 12 cents per pound, which is supposed to be cost, and the amount will be deducted from the first delivery of beets."

**SPRECKELS SUGAR COMPANY, SALINAS, CAL.**—This large factory was commenced in 1898 and completed in time for the campaign of 1899. It is about 5 miles from Salinas, and the beets are grown in Salinas valley for 50 miles each way. This is a large and beautiful valley. There are at least 80,000 or 90,000 acres available for the production of sugar beets. A little over 20,000 acres were planted the past year. It is the intention to increase the amount of land for growing sugar beets to 35,000 acres in 1900. The factory has a capacity for working 3000 tons of sugar beets per day. It is the largest factory in the world, which is an indication of the energy with which this new industry is starting in America. This factory receives its water from a system of wells. It requires about 13,000,000 gallons per day. Sugar beets are cultivated in the fields by Japanese laborers, who receive 90 cents to \$1 a ton, which covers the cost of weeding, hoeing, thinning and bunching until the crop is ready for the market. The early part of the season was quite dry, but by July every indication was promising for a good crop.

The parties who operate this factory have also been operating the factory of the Western Beet Sugar Company at Watsonville. It was decided to be best to close down the Watsonville factory for this campaign and to ship the beets to the Salinas factory. It is the intention of the proprietors to secure enough acreage in future to operate both these factories for full campaigns. The Salinas factory started up August 7 for a trial run, but the regular work of the campaign began later, and finished February 13. It sliced 175,000 tons of beets and produced 20,000 tons of sugar.

**UNION SUGAR COMPANY, SANTA MARIA, CAL.**—This company was organized by the same parties as those interested in the factory at Alvarado. It has a capacity for working 500 tons of beets daily. To supply this factory 6500 acres of beets were planted. In the early part of the season, about June 1, the outlook was very encouraging for a large crop of beets.

It was estimated at that time that the supply would reach 80,000 tons. Owing to the drought only 3000 acres were harvested. The drought was not the only drawback met in growing the sugar beets during the season of 1899. The beets were very badly affected by beet blight, called by the management "bacteriosis." The factory began slicing beets September 20, and its campaign extended seventy days, during which time it worked 16,000 tons of beets and produced 1607 tons of sugar.

## MISCELLANEOUS.

A CHEAP and effective dressing for a belt is tallow. When a belt is pliable, and only dry and husky, the application of blood-warm tallow, thoroughly dried in by the heat of the sun or fire, will tend to keep the belt in good working condition. The oil of the tallow passes into the leather, serving to soften it, and the stearin is left on the outside, to fill the pores and leave a smooth surface. The addition of resin to the tallow for belts, if used in wet or damp places, will be of service and help preserve their strength. Belts which have become dry and hard should have an application of neat's foot or liver oil mixed with a small quantity of resin. This prevents the oil from injuring the belt and helps to preserve it. There should not be so much resin as to leave the belt sticky. Belts should not be soaked in water before oiling and penetrating oils should be used, except occasionally when a belt becomes very dry and hard. It may then be moistened a little and have neat's foot oil applied. For new belts a composition of tallow and oil, with a little resin or beeswax, should be used. Prepared castor oil dressing is good and may be applied with a brush or rag while the belt is running. Belt dressings of any kind must not be applied too liberally in the case of a new belt, otherwise it is apt to stretch, making it very liable to run out of line.

**MAGNETISM** is considered to be "a separate and distinct force from electricity." Among points of difference, magnetism, unlike heat, light or static electricity, affords no phenomena immediately addressed to the senses. Those words "magnetism" and "electricity" are only words used to connect cause and effect, convenient expressions to conceal our ignorance. We give names to nature's forces, but can do no more. "Electricity" is not a thing, but a force; it is called static electricity when stored up as idle, though then energy ready for doing work; while doing work it is called dynamic electricity. The other invisible, intangible manifestation that we call "magnetism" is "separate and distinct" from electricity, yet creatable thereby. The magnetic effect produced by electrical induction is the seat and center of all our electrical industries, telegraph, telephone, power and light. Like heat, light and electricity, magnetism is susceptible of being called into action at any time when subject to the right tests. To explain these manifestations of energy is a gift not vouchsafed to any one. It may be that they are all one force appearing in different forms.

**VELOCITY** is measured by the number of feet traversed in a second. Thus a cricket or base ball hit hard travels about 100 feet per second, which is about the rate at which a carrier pigeon flies. A golf ball may start at 150 feet per second, an arrow at 250 feet, a pistol bullet at 750 feet, a rifle bullet at 1500 to 2000 feet. But the energy of the blow delivered by a projectile when instantaneously stopped in its flight is proportional, not to the velocity, but to the velocity multiplied by itself or squared; so that if the velocity be doubled the energy is increased four fold. But the energy is directly derived from the propellant. So that to double the velocity of a bullet one must produce four times the energy, to obtain which the charge must be increased four fold. And one can not have energy forward without energy backward, or recoil. Take a pistol with .750 f. s. velocity, quadruple the charge, and give the new weapon four times the length of the barrel for the gases to expand in, one gets a rifle with twice the velocity obtained by the pistol, or 1500 f. s.; but one also increases the recoil to such an extent that if a rifle were held like a pistol it would fly back into the face of the firer.

In Riverside county, Cal., water at the present time for irrigation is sold at 75 cents an inch—that is, the amount that would run out of an inch pipe in twenty-four hours under ordinary pressure, say, four pounds to the inch. This is estimated to be 12,960 gallons.

A MAN can vote at the coming election only at his place of residence. A man who emigrated to the United States as a minor and is now otherwise suitably qualified, has a right to vote at the next election if his father had become naturalized.

A DAY'S WORK put into the necessities of life will produce more than it would twenty-five years ago; but a day's work saved and turned into capital will now only earn half what it would twenty-five years ago.

GLASS, such as is used for window panes, is produced by the fusion at a very high temperature of purified white sand, lime, sulphate of soda, arsenic, manganese, salt cake and "cullet," or broken glass.

WATER under pressure will rise vertically 2 feet approximately for every pound of pressure, such use being dependent upon the pressure in pounds per square inch, and independent of size of pipes.

WHERE no demand is proven, a note payable on demand bears interest only from the date of the commencement of the suit.

A 54-INCH circular saw, running 800 revolutions per minute, without cutting, would require 1.35 H. P.



## Agricultural Review.

### EL DORADO.

**EL DORADO PEARS IN DEMAND.**—El Dorado Republican, Oct. 11: At a meeting of the Farmers' Club last Saturday in Placerville a proposition from the Sacramento Canning Association was submitted for the consideration of orchardists. This association has been buying pears raised in this county this year at \$16 per ton. It now proposes that the growers arrange to supply a fixed quantity of pears for a period of five years at \$20 per ton. As we understand the proposition, the cannery is to take all the pears at that price, if they are of the size required, and the orchardists are to agree to supply their entire crop at the price named. The offer is conditional upon the securing of a certain number of tons. Some of the growers are very much in favor of the contract, while others oppose it.

**FINE CANNERY PRODUCTS.**—Cool correspondence El Dorado Republican, Oct. 11: Johnston's cannery closed down last week, after a successful run of about three months. During this time they have canned between 21,000 and 22,000 cans of fruit, meat, soup, chicken, tomatoes and beans, also a large quantity of catsup, jam and jelly. They had a fine exhibit of fruit, etc., at the State Fair in Sacramento, for which they were awarded two gold medals, one for the meats and vegetables and one for the fruits and jellies. They also received the first prize for their olive oil. All the vegetables and nearly all the fruit was raised on the Johnston ranch. They had between 400 and 500 tomato vines, off of which they obtained 3000 cans of tomatoes. It is a fine thing for the neighborhood, giving employment to a number of girls. The canned goods are all engaged to three different parties in Sacramento.

### FRESNO.

**LARGE RAISIN PACK.**—Reedley Exponent, Oct. 11: We are informed on reliable authority that considerable over 100 cars of raisins of ten tons each will be packed at Reedley this year. This will be the banner year of any pack of raisins we have had so far both in quality and quantity. Our packing-house is running over time so as to aid the growers in having the use of their sweatboxes.

### KERN.

**COWS AND HAY PROFITABLE.**—Kern County Echo, Oct. 11: A prominent citizen of Knight's Landing cites an illustration of the benefits to be derived from the creamery in that town. He says that five years ago a man who had spent twenty years wheat farming, until it nearly broke him, purchased a piece of land on the river near that town. He had to mortgage it for nearly all it was worth. He planted alfalfa and started out with two cows. He increased the number from time to time, as his circumstances would permit. His revenue from the milk that he took to the creamery enabled him to scale down the mortgage every month, and he finally paid it all off and had his ranch clear. Fortune continued to smile upon him until he laid by a good sum and recently rented his place, sold his cows for \$900 and has gone to Sacramento to reside until he can educate his children.

**BIG SHIPMENT OF FRUITS.**—Bakersfield Californian, Oct. 11: Porter Bros. Co. is engaged in packing a carload of peaches and pears to be shipped to London. There will be half a carload each, consisting of 250 boxes of extra choice peaches and pears cut in halves and dried. They anticipate a probable total amount this season of 150 carloads of fruit.

### KINGS.

**BOARD OF HORTICULTURE.**—Hanford Journal, Oct. 9: The County Board of Horticulture met yesterday at the courthouse for the purpose of making a report of the condition of the fruit industry of Kings county to the State Board of Horticulture. In the discussion of the question it was decided that all the fruit in the county, except apples, pears and prunes, was in first-class condition. The apples and pears are affected with the codlin moth to a certain extent and the prunes are affected with the yellow mite. It was also decided to communicate with the State Board for the purpose of securing from Europe some parasite, which is said to destroy the codlin moth, to distribute it among the apple and pear orchards.

**AN OBJECTIONABLE NETTLE.**—Hanford Sentinel: An objectionable weed of the nettle family has been discovered growing along the Southern Pacific track in this county. N. W. Motheral made the discovery about a year ago and notified the railroad company of the fact. Nothing was done, however, to destroy the weed, which during the time has spread over a great deal of ground. Not

being able to discover the character or the variety of the weed, he sent a sample of the same to Prof. E. H. Walker, who classified it according to the best known authorities in botany, and reported as follows: "The name of the weed is *Urtica*, coming from the root word 'Urtica', meaning nettle. The plant is prevalent in southern California, Colorado and as far south as Texas. It is of a perennial nature, sprouts from the roots and is extremely difficult to eradicate. The fact that the weed is of a thistle character, producing thorns that will prevent stock from grazing where it is found, is sufficient cause why it should be kept out of this country if possible. The noxious weed was brought in some hay which was scattered along the railroad track.

### LOS ANGELES.

**SAN ANTONIO FRUIT EXCHANGE.**—Pomona Times, Oct. 10: At the annual meeting of the stockholders of the San Antonio Fruit Exchange the following board of directors were elected: D. C. Teague, F. E. Adams, S. W. Arbuthnot, A. H. Hebbard, J. R. Moles, H. J. Nichols, W. A. Johnstone, C. B. Sumner and George F. Ferris. Following were chosen as officers: D. C. Teague, president; F. E. Adams, vice-president; S. W. Arbuthnot, treasurer; P. J. Dreher, secretary and manager. The operation of the Exchange for the year 1899-00 were very satisfactory. There were sold 339,405 boxes for \$879,156.45; paid for freight, \$312,087.45; paid for materials, expenses and to growers, \$567,069.31. The sales included seedlings and all grades of fruit. Considering the many small lots and considerable washed fruit, the showing is remarkable, and, as we understand, without a loss of as much as \$100 on the entire sales. A noteworthy fact is that the fruit was marketed in car lots in 105 different markets in all parts of the country.

### ORANGE.

**SANTA ANA CANNERY.**—Anaheim Gazette, Oct. 11: The cannery at Santa Ana has closed down for the season, after a four months' run. The season was shorter than anticipated, only a small quantity of fruit being supplied from the local field. The tomato crop, which about Anaheim is turning out splendidly, was disappointing. The number of cases packed were: Apricots, 5258; peaches, 5632; pears, 16,300; tomatoes, 3787; total, 30,977. The total pack of last season exceeded that of the present by about 10,000 cases and the amount disbursed for labor was greater. This season's labor bill foots up \$15,000. Cash paid out for fruit was \$11,260. Orders are being received and shipments are being made to New Orleans, Pittsburg, Kansas City and Joplin, Mo. One order has been received from Ceylon.

**SUGAR BEETS.**—Anaheim Gazette, Oct. 11: E. Turk has returned from Oxnard, where he has been engaged during the season in the chemical department of the sugar factory at that point. He departed on Friday for Louisiana to assume a similar service in the Oxnard Bros.' mill at Adeline plantation. He reports the season at Oxnard as being most successful. Sixty thousand tons of beets were crushed and 40,000,000 pounds of sugar produced. As high as 2100 tons of beets were received at the factory in one day, and the highest day's sugar production was 5000 sacks.

**MAMMOTH CORN STALKS.**—Santa Ana Blade, Oct. 12: O. F. Halleck of Fairview has sent to the Chamber of Commerce here a half-dozen stalks of corn, some of which are 20 feet in length. The Chamber of Commerce will forward the samples to Los Angeles, where they will be given a place in the Orange county exhibit.

### PLACER.

**CONCENTRATED FRUIT.**—Auburn Republican-Argus: A new way of utilizing fruit has been studied out by Sherman Bros. of Newcastle. Boston capital has been secured for machinery for making all experiments, and the result is the whole matter is settled. With perfect success they are now turning out the product known as concentrated fruit on their ranch. More capital can be secured in the East. Mr. Worrell from Boston, who has done good work along that line, will be present and with representative men of this section will address the meeting. A factory is contemplated for this county at some point along the line of the railroad, and, what is of special moment, under-sized fruit and fruit too ripe for shipment can all be utilized.

### RIVERSIDE.

**FRUIT SHIPMENTS.**—Riverside Press and Horticulturist, Oct. 12: For the first time this year, the Press has no orange shipments to report this week in its weekly fruit review. Seven carloads of lemons were shipped, making 180 for the season. One car of oranges and thirty-two of lemons

were shipped from southern California last week, making a total of 17,685 cars of citrus fruits for the season, as against 10,332 last year and 15,036 in 1898. The shipments of deciduous fruits aggregated 5697, as against 6034 last season to date.

**RIVERSIDE FRUIT EXCHANGE.**—Riverside Press and Horticulturist: At an adjourned meeting of the Riverside Fruit Exchange the following officers were elected: President, Capt. M. J. Daniels; vice-president, G. W. Garcelon; secretary, S. H. Herrick. Directors—Capt. M. J. Daniels, G. W. Garcelon, S. H. Herrick, C. H. Low, George Frost, C. F. Marcy, W. P. Russell, E. W. Holmes, A. H. Naftzer, A. P. Johnson, J. E. Cutter. The president, vice-president and secretary were appointed an executive committee for the ensuing year. G. W. Garcelon was elected a director and representative on the Board of the Southern California Fruit Exchange.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian, Oct. 11: Newtown Pippins are being shipped to Europe. The first cars of the season went out last week. Eastern apple shipments for the past week, 43 cars; total for season, 176 cars. Six cars went out to State points. Buyers and packers agree that the Pajaro Bellefleurs of this season have never been surpassed. They are going out nicely, and prices have not been shaded. Packers are busy getting in their Newtowns. They are much further along with picking and hauling than they were at this time last year. They do not want to be caught by the rainy season. In the northern part of the valley most of the orchards have been picked clean of apples.

### SANTA BARBARA.

**SOME PERSIMMONS.**—Santa Barbara News: There are very few people who realize what an industry the raising of persimmons is on the Ellwood Cooper ranch. There is a fine orchard there, and the trees are bearing well for a dry year. There will be two crops produced this season. There are few, also, who know that the persimmon is a fruit that can be shipped to a distance. But the Cooper people shipped a car of 1300 boxes to Chicago. The fruit will keep in perfect condition and will be of good flavor when it reaches its destination and is allowed a day or so in which to ripen.

### SAN JOAQUIN.

**BIG LOT OF HAY.**—Stockton Mail, Oct. 11: The barge Oso was loaded with hay day before yesterday by Sam Hewlett, her cargo amounting to 4500 bales, and the same buyer loaded the barge Echo yesterday with 4000 bales and the Jersey this morning with 3500 bales. This afternoon he was loading 3500 bales on the Ajax. In all there were 1800 tons. This is said to be the largest shipment ever made from any part of the State in the same length of time—San Francisco, of course, excluded, as that is a seaport. The hay crop of this county this year was exceptionally large, and wagon loads are still arriving daily from the farms.

**BIG CATTLE RANGE.**—Stockton Mail: It is reported that the whole of Staten Island, lying about 4 miles west of New Hope, is to be converted into a cattle range. Dairy grasses will be planted, and it is estimated that 5000 cows will be maintained. A creamery will be put up for the making of butter and cheese. For two years no wheat has been raised on the island, and the only tillers were Chinese, who raised patches of potatoes here and there.

**LODI MAKING BRANDY.**—Lodi Sentinel, Oct. 13: Little by little the town is adding to its resources and products. The latest is the brandy product being turned out by Bauer & Guggolz at their winery. The still is now in full operation. A run was made consisting of about 2700 gallons, which was barreled early this week under inspection of the Government gauger. From now on the distillery will have but few leisure hours, as it is the intention to run day and night.

### SONOMA.

**A FORTUNE IN HENS.**—Santa Rosa Press-Democrat: From 2400 hens a Petaluma poultry raiser sold \$3700 worth of eggs and \$430 worth of young stock. His feed bill was \$1900. He has \$2000 invested in chicken houses, brooders, incubators, etc. He figures his loss in grown hens at one in five. The chickens range over twenty acres of land.

**THE COOPER STOCK RANCH.**—Sonoma County Farmer, Oct. 12: Marion Cooper states that wild oats were allowed to go to seed over half of his 2000-acre ranch on the Booneville road, northeast of Cloverdale. His sheep were kept in the other part of the premises and have proved quite profitable this year. He has an abundance of spring water piped to the

ranch house and garden. When Mr. Cooper visited the ranch the other day he picked strawberries from runners planted last September, and string beans whose pods averaged 10 inches in length. Five heads of early cabbages weighed sixty pounds on August 15. After visiting the Cloverdale Citrus Fair last February he planted forty orange trees and all are growing now, except one, and doing nicely. While riding horseback over the range Mr. Cooper tore up a bunch of wild oats about even with the ground that measured 9 feet 2 inches.

**CORN SILK WANTED.**—Petaluma Argus, Oct. 10: J. R. Denman has a letter from Clinton E. Worden, a wholesale druggist of San Francisco, in which Worden offers to buy 200 or 300 pounds of corn silk at 9 cents a pound. Mr. Denman's crop is already harvested, but some other farmers might make a few dollars out of their corn silk if they are disposed to sell it.

### TULARE.

**TULARE COUNTY CITRUS COMPANY.**—Tulare County Times, Oct. 11: Articles of incorporation of the Tulare County Citrus Company were filed in the county clerk's office to-day. The object of the corporation is to carry on the business of agriculture, horticulture and viticulture. The principal place of business is Fresno; capital stock, \$100,000, divided into 1000 shares of the par value of \$100 each; amount actually subscribed, \$24,000. The directors appointed for the ensuing year are: W. P. Boone of Dinuba, F. H. Wilson, William G. Uridge, C. W. Wyllie and Sig Wormser of Fresno, S. F. Earl and M. D. Levy of San Francisco.

**HARVESTING AND SEEDING.**—Hanford Sentinel, Oct. 11: G. W. Betts of Waukena is in town to-day, having completed the planting of 640 acres of grain for P. McRae. Mr. Betts also harvested 1330 sacks on the ranch for Mr. McRae, before he turned in and planted for the new crop. The Eastern people who read this will wonder how Californians can get a new plant on the old ground so soon.

### VENTURA.

**THE HARVEST OF BEANS.**—Oxnard Courier: The bean harvest had progressed rapidly up to the time of the rain, but subsequently the dampness of the vines prevented the threshers from doing very rapid work. Hauling to the different warehouses has been active and the vacant space in them is rapidly filling up. In the Oxnard warehouse there are over 20,000 sacks of this year's crop and 10,000 sacks are yet to be received. The yield is heavier in some places than was expected, while the crop, as a whole, is holding out in standard better than many anticipated. A Revelon, on irrigated land south of town, received twenty-two sacks to the acre, which is equivalent to 1870 pounds. Considering the season, the length of time some of the land has been planted to Limas and the good prices, many will realize more than in an average year.

### YOLO.

**FINE FRUIT.**—Winters Express, Oct. 11: As pretty a lot of dried fruit as ever was put up in California was sent from Winters Tuesday morning. It consisted of a carload of peeled Crawford peaches packed for Porter Bros. by the Winters Dried Fruit Co. The fruit was not very large, but it had been carefully and scientifically handled from tree to car. There were eighteen tons of it, all handsomely packed in neat boxes and tastefully labeled, so that the consumer will know the brand and just where it came from. J. W. Pleasants was the grower and it be remarked that not every orchardist can turn off eighteen tons of peeled peaches. The value at present prices is over \$4000.

**CREAMERY DIVIDENDS.**—Yolo Mail, Oct. 12: The sum of \$6000 will be distributed among the patrons of the creamery on the 15th inst., being the earnings of the institution for the month. The directors are contemplating extensive improvements and the enlargement of the plant.

## Horse Owners! Use

GOMBAULT'S

## Caustic Balsam

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circular. THE LAWRENCE-WILLIAMS CO., Cleveland O.



## THE HOME CIRCLE.

### What is Success.

Is it to worship earthy, groveling Gold,  
And, dollar-blinded, to look only down,  
To rake the muck heap, and forget the crown,  
Until Youth's bounding blood creeps  
strangely cold;  
To dwell with Envy, Arrogance, and  
Dread,  
To barter all Benevolence for dross,  
To lose Companionship,—nor feel its loss,  
Because the flower of Sympathy is dead,—  
Is that Success?

To labor for the rainbow bubble, Fame,—  
Alloat so fairly in the morning air,—  
A perfect jewel for a prince to wear,—  
Is it a recompense for all its claim?  
Thro' careful night, and crowded, strenu-  
ous day,  
Thro' iron rebuff, or flattery,—like snow  
That leaves one thirsty,—it is grasped,  
and, lo!  
It vanishes in Nothingness away!—  
Is that Success?

With comrade Duty, in the dark or day,  
To follow Truth,—wherever it may lead;  
To hate all meanness, cowardice or greed;  
To look for Beauty under common clay;  
Our brothers' burden sharing, when they  
weep,  
But, if we fall, to bear defeat alone;  
To live in hearts that loved us, when we're  
gone  
Beyond the twilight, (till the morning  
break!) to sleep.—  
That is Success!

—Ernest Neal Lyon, in  
October "Success."

### A Hard Lesson.

"Are you going to the State Fair this year, Mrs. Daly?"

Mrs. Daly lifted her head from her work with a quick, jerky motion, and replied in tones at once surprised and unhesitating.

"Why, no, Mrs. Thorpe—certainly not. We hadn't thought of such a thing. Are you?"

"Yes, we've decided to go. We had good crops this year, and prices were better than usual, as you know. We've paid off a big slice of the mortgage, and now we're going to have a little holiday. 'Twon't hurt Ben and me, but we care most on the young folks' account. They ought to have a chance to get out once in a while. You'd better make up your mind to go too, Mrs. Daly. They say the fair is to be extra fine this year—a regular exposition—and there isn't to be any horse racing."

Mrs. Daly pursed up her lips. "We can't afford it," she said shortly.

Mrs. Thorpe's color rose. "Well, I suppose you think we can't either, and maybe we can't as well as you, because your farm is all paid for and ours isn't. But we have good health and are doing well, and after talking it all over, Ben and I have decided to go, and the children are wild with delight. They can't think or talk of much else. Of course I shan't take Cora; it would be too hard for her and me too, but Aunt Sally will be only too glad to take care of her. All the rest are going, and I don't believe but what it is right. I've heard it said that we never know what we can afford, and I guess there's something in it."

"Of course you are at liberty to do as you please," rejoined Mrs. Daly, her voice plainly expressive of disapprobation; "so are we, and we shall stay at home."

"Well won't you let Eunice go, any way? Please do. We'd be very glad to have her with us, and would take good care of her, and see that she had a first-rate time. It wouldn't cost so very much, Mrs. Daly, and it would do her a world of good."

"It would cost more than we could afford, and there is no use talking about it," was the curt reply.

"You can afford it, Mrs. Daly," returned Mrs. Thorpe, with still heightened color. "You've got a fine farm, all paid for, and money in the bank. Eunice is a nice, bright girl; she works hard, with very little change, and this trip would be worth much more to her than it would cost. I know you think

I am talking too plainly, and perhaps I am, but I do believe you are making a great mistake if you refuse to let her go with us."

An angry red dyed Mrs. Daly's cheeks, and her eyes flashed. "I do not thank other people for meddling in my affairs," she retorted icily; "and I don't propose, usually, to meddle with theirs; but since you've been so free to express your opinion I will say that I think it is foolish and extravagant for people to do anything that isn't absolutely necessary, as long as there's a dollar of mortgage on their place."

Mrs. Thorpe rose to go. "As I said, we don't know what we can afford. I'm afraid you'll wish some day that you'd thought so in time. Well good-bye. We're old neighbors, and don't want to quarrel, and I guess we're about quits now as to plain speaking, aren't we? And I hope you'll change your mind about Eunice when you come to think the matter over."

"I shall not change my mind," Mrs. Daly rejoined stiffly, and the caller departed.

When Mrs. Thorpe reached home, she found Eunice Daly there. She had stopped on her way from town, where she had gone for the mail and to do some shopping, and she was now eagerly listening to Maggie Thorpe's chatter of the coming holiday.

As Mrs. Thorpe entered the room, Maggie looked anxiously and inquiringly into her mother's face; then seeing by its expression and the slight shake of the head that her errand had been unsuccessful, her own countenance fell. "It's a shame!" she declared to herself, with indignation.

Maggie had set her heart on having Eunice accompany their family to the fair, and Mrs. Thorpe was also very desirous that the young girl should enjoy the outing; so, on seeing her drive by on her way to the village, she had decided to go over to Mrs. Daly's that afternoon and try to obtain her consent to the plan. Eunice, however, knew nothing of the errand, and was oblivious to the signs which passed between mother and daughter.

"Oh, how nice it is that you are going!" she exclaimed. "How I wish I could go, too, but of course I can't," and she sighed wistfully.

"Well I think it's a shame if you can't!" Maggie cried impulsively. "You might just as well as not, if your parents only thought so."

"There, there!" said Mrs. Thorpe. "Be careful, Maggie. I wish very much that you could go with us, Eunice, but if you can't, why never mind; you're young yet. There's lots of time ahead, you know."

"Oh, yes, but I do want to go to this fair so badly. I'm not finding fault with my father or mother, Mrs. Thorpe; only I wish they looked at things the way you do. Well, I must go. They'll be wondering what has become of me."

As Eunice drove slowly home, her heart was very heavy, and a sense of injustice mingled with its heaviness. True, she had not said anything home about going to the fair; indeed the idea of attending it had scarcely entered her mind until this afternoon at Mrs. Thorpe's; but then, with the intense longing for this pleasure which had seized upon her, was coupled the certainty that it would be denied. But as she drove toward home, she made up her mind that she would ask to be allowed to go; she could only be refused. Though why must she be refused?—she asked herself. She had staid closely at home and worked hard. Surely she might be granted this bit of outside life and experience. Well, it would be just as her mother said. Her will was the law in the household, Eunice well knew, and she was the to be first consulted.

But that evening, Mrs. Daly, never very genial, was still under the influence of the irritation produced by Mrs. Thorpe's call; and Eunice seeing that something was amiss, waited for a more favorable season to present her plea. When she did so a day or two later, with the result as she had foreseen, she shed bitter tears in the solitude of her own room, and the most rebellious feelings which she had ever known stirred

in her heart; nor did they pass away as the days went by.

If Mrs. Daly had been a tender, affectionate mother, all might have been different; but there was no loving sympathy to help tide over this hard experience. Mrs. Daly saw a change in her daughter and resented it. "The idea of the girl's thinking of such a piece of extravagance, and being vexed when it was denied!" she said to herself in great indignation. But as time passed and Eunice's old self did not return, while she openly upbraided, she secretly wondered. It couldn't be just on account of that fair, she reflected. Eunice wasn't so foolish as all that.

Summer came again, and at its close a terrible blow fell upon the Daly home. Eunice had run away with a man, a stranger, who had been spending a few weeks in the neighborhood. He had been at the house once or twice, but Mrs. Daly had taken a strong dislike to him, not without reason, and had forbidden Eunice his company. She had not seen him again, and had congratulated herself that they were well rid of him. And now this!

Mrs. Daly shed no tears when she knew the truth. Her face whitened, and she shook as with ague fit. Then with a tremendous effort of the will she rallied and went about her usual tasks with a set, grim face. But the blow had struck deep.

Several years passed in which there was not a word from Eunice. Then there came a letter bearing the New York postmark. Inside there was no address.

"DEAR MOTHER," the letter ran, "I don't suppose you care to hear from me, but I am going to write because there is something in particular that I want to say, and then I will never trouble you again in any way."

"I suppose you feel very hard toward me. You never loved me, I think, not really, and of course you were terribly angry when I ran away with that man. Well I know I did wrong, and I've been punished enough for it. I had a wretched life with him; then he left me, and though I wasn't quite so miserable, I've had a time to get along, because my health has been so bad; but I've got along honestly, somehow or other, and now it's about over. The beginning of it all was your not letting me go to the State Fair that time. I did want to go so badly; you don't know how I wanted to. I don't believe you could know either, for you never cared very much for anything of that kind."

"I knew you could afford to let me go; we were out of debt, and there was money in the bank, and I knew father would let me if you would. When you refused, I felt bitter, and I lost interest in things at home. I wanted to get away, and when that man—I can't bear even to write his name—was so pleasant and polite, and talked so fair, and seemed to care so much for me, I consented to marry him, and I did; and I've paid dearly enough for my foolishness, though I don't think I was the only one to blame."

"Now, mother, I am writing at last for the sake of Ben and Agnes. I shall not live much longer, and I want to beg you before I die to do differently by them. Be more gentle with them, and don't keep them at work all the time. Let them get away from the farm once in a while. Don't think you can't afford it. It is so much better to have some pleasure as you go along than to save everything up for by and by."

"And then you know they will have my share some day, and I'd be so glad to think part of it could be used in making them happier now. Agnes is so fond of music. If you would only get her a piano, and let her take lessons! Won't you, mother? It may save her from something dreadful, who knows? And Ben is such a good scholar. Won't you send him to college? Oh, if I only knew these things would be afforded out of my share in the farm, I should die happy. I can't know now, but maybe I should afterwards."

"It has taken me a long while to

write this letter. I have had to stop many times, and it is written so badly I'm afraid you can hardly read it. I am very weak."

"I shall not send it just yet. I am going to leave word to have it sent when the end comes; that won't be long. So when you read it you may know that I am gone."

"Give my love to father and Ben and Agnes. Good-bye, mother."

"EUNICE."

"We never know what we can afford." The words seemed to burn themselves into Mrs. Daly's brain as they repeated themselves over and over in the weeks of bitterness that followed.

Ben is preparing for college, and Agnes has a piano. It may be Eunice knows.—C. A. Parker in Country Gentleman.

### The Plaything of a King.

The Emperor of Germany has a toy that would gladden the heart of the most exacting boy. It is a miniature frigate, a full-rigged three-masted warship, 55 in length, drawing but 4 feet of water and having a capacity of thirty tons. The ship is an heirloom in the Imperial family of Germany, having been presented by William IV., King of England, to the present German emperor's great-grandfather, Frederick William III. It gave the reigning monarch his first taste of life on the wave, and in his boyhood days one of his favorite amusements was to sail on the watery Potsdam, in company with his brother Henry, in this tiny man-of-war.

At a distance the ship's dimensions are very deceptive, but a man at the rail or a boat moving alongside soon brings out, by contrast, the smallness of the craft. The frigate can be sailed in the same manner as the largest ship, but the crew must be Liliputians in size and scanty in number; a seaman of ordinary build would be totally out of place on the yards of this vessel. He would probably be in grave danger of bringing the spars down to the deck with his own weight. "Royal Louise" is the name of this kindly toy; she was christened after the Prussian Queen Louise. The little frigate was built on the Thames river, at Woolwich, in 1832.

An easy thing, O Power divine,  
To thank thee for those gifts of thine!  
For summer's sunshine, winter's snow,  
For hearts that kindle, thoughts that glow;  
But when shall I attain to this,—  
To thank thee for the things I miss?

—Thomas Wentworth Higginson.

### BLOOD

We live by our blood, and on it. We thrive or starve, as our blood is rich or poor.

There is nothing else to live on or by.

When strength is full and spirits high, we are being refreshed, bone muscle and brain, in body and mind, with continual flow of rich blood. This is health.

When weak, in low spirits no cheer, no spring, when rest is not rest and sleep is not sleep, we are starved; our blood is poor; there is little nutriment in it.

Back of the blood, is food, to keep the blood rich. When it fails, take Scott's emulsion of cod-liver oil. It sets the whole body going again—man woman and child.

We'll send you a little to try, if you like.  
SCOTT & BOWNE, 409 Pearl street, New York.



## Never Too Old to Learn.

Socrates, at an extreme age, learned to play on musical instruments, for the purpose of resisting the influences of old age.

Cato, at eighty years of age, began to learn the Greek language.

Plutarch, when between seventy and eighty, commenced the study of Latin.

Boccaccio was thirty years of age when he commenced his studies in polite literature, yet he became one of the three great masters of the Tuscan dialect, Dante and Petrarch being the other two.

Sir Henry Spelman neglected the sciences in his youth, but commenced the study of them when he was between fifty and sixty years of age. After this time he became a most learned antiquarian and lawyer.

Colbert, the famous French minister, at sixty years of age returned to his Latin and law studies.

Ludovico, at the great age of one hundred and fifteen, wrote the memoirs of his own times. A singular exertion, noticed by Voltaire, who was himself one of the most remarkable instances of the progress age may make in new studies.

Ogilvy, the translator of Homer and Virgil, was unacquainted with Latin and Greek till he was past fifty.

Franklin did not fully commence his philosophical pursuits till he had reached his fiftieth year.

Dryden, in his sixty-eighth year, commenced the translation of the "Iliad," and his most pleasing productions were written in his old age.

## Hot Water.

One of the most powerful promoters of health and beauty is hot water, and yet few women realize it.

A cup of hot water taken before breakfast is an excellent aid to digestion, and taken at night just before retiring is very efficacious in quieting the nerves. Frequent hot baths will keep the skin in excellent condition. A hot bath taken when one is fatigued is most restful and at night will be found very soothing.

If persons afflicted with an oily skin will wash their faces every night in hot water, to which a little borax has been added, and rub down with a rubber face brush, their complexions will be greatly improved and blackheads will all disappear.

Hot water will usually relieve headaches of all kinds, and warm water is one of the best of applications for sore eyes. Hot water is also excellent for bruises, to relieve soreness and remove purple discolorations of the skin. Hot water is also one of the best of antiseptics, as all surgeons will testify. It probably comes nearer to the universal remedy for all the ills that flesh is heir to than any panacea the doctors have ever been able to compound, and women should make more use of it than they do.—Farmers' Review.

## New England Economy.

There is a little settlement of New Hampshire people in Kiowa county, Colorado. Among other things they brought with them the New Hampshire aversion to using any more words in conversation than are absolutely necessary. Two of them met on the road recently and indulged in the following conversation:

"Mornin', Si."  
"Mornin', Josh."  
"What'd you give your horse for bots?"

"Turpentine."  
"Mornin'."  
"Mornin'."

A few days later the men met again, and here's the way a hard luck story was told in mighty few words:

"Mornin', Si."  
"Mornin', Josh."  
"What'd you say you gave your horse for bots?"

"Turpentine."  
"Killed mine."  
"Mine, too."  
"Mornin'."  
"Mornin'."

## Ventilate the Clothes Closet.

It is the usual thing to have one or more closets for clothing opening into each bedroom. Often these are in inner walls; that is, do not have a window opening out of doors, and are consequently dark, unventilated pockets. This is exceedingly objectionable for closets anywhere, and especially so for closets opening into a bedroom. An outer garment which has been worn for several days—the frock of the woman, the coat and trousers of the man—is taken off and hung up in this dark, unventilated box of a place. The garments are more or less impregnated, even with the most cleanly people, with effete matters which it is the function of the skin to remove from the body. These are of organic character and must decay, adding impurities to the atmosphere. Where such closets already exist, care at least may be taken to thoroughly air all clothing before placing it in the closet, and the closet door may be left open while the bedroom is being aired and sunned, as it should be for several hours each morning.

## His Object.

After I had watched a colored man fishing in a South Carolina brick-yard pond for forty minutes without pulling up his hook, I asked him if he thought there were any fish to be caught. "No, sah, I reckon not," he replied. "But you seem to be fishing?" "Yes, sah." "But perhaps you are not fishing for fish?" "No, sah." I waited ten minutes for him to explain, but as he did not, I finally asked him what particular object he had in view. "De objick, sah," he repeated, without taking his eyes off the pond or moving the pole, "de objick of my fishin' for fish whar dere hain't any is to let de ole woman see dat I hain't got no time to pick up de hoe and work in de truck patch!"—Boston Beacon.

## The Right Thing to Do.

The sermon was on the downward path of a sinner, and the clergyman used the illustrations of a ship drifting on the rocks. A jack tar who had strolled in became deeply interested. "The waves dash over her!" exclaimed the minister. "Her sails are split! Her yards are gone! Her masts are shivered! Her helm is useless! What can save her now?" "Let go the anchor, ye lubber!" yelled the excited seaman. He meant well, but they ran him in for brawling all the same.—London Spare Moments.

There was a sign upon the fence—  
"Twas 'Paint."  
And every sinner that passed by  
And saint  
Touched a finger to it and—  
"Gee-whizz!"  
They'd say and wipe it off;  
"Why, so it is."

—Credit Lost.

"You've sent your boy to college, I hear," remarked the neighbor. "Well, I hope he will acquit himself with credit." "He won't need to, begosh!" said Mr. Gaswell, somewhat irritated. "I'm able to supply him with the cash right straight along."—Chicago Tribune.

First Cannibal—It says in the paper here that there were 10,000 people in Ladysmith, and that there was nothing to eat!

Second Cannibal—That's ridiculous! Ten thousand people, and nothing to eat!

Teacher—How do you account for the phenomenon of dew?

Boy—Well, you see, the earth revolves on its axis every twenty-four hours, and in consequence of this tremendous pace it perspires freely.—Tit-Bits.

"Pa, give me a nickel for the poor blind man." "There; put it in his tin cup, kind-hearted little boy." "He ain't got no tink-up, pa; he's a-sellin' peanuts."

## DOMESTIC ECONOMY.

## Bake.

Beans, 8 to 10 hours.  
Rolls, 10 to 15 minutes.  
Cookies, 10 to 15 minutes.  
Biscuit, 10 to 20 minutes.  
Custards, 15 to 20 minutes.  
Graham gems, 30 minutes.  
Fish, 6 to 8 pounds, 1 hour.  
Pie crust, 30 to 40 minutes.  
Potatoes, 30 to 45 minutes.  
Turkey, 10 pounds, 3 hours.  
Pudding, plum, 2 to 3 hours.  
Cake, plain, 20 to 40 minutes.  
Gingerbread, 20 to 30 minutes.  
Cake, sponge, 45 to 60 minutes.  
Bread, brick loaf, 40 to 60 minutes.  
Pudding, bread, rice and tapioca, 1 hour.  
Pork, well done, 30 minutes per pound.  
Chickens, 3 to 4 pounds, 1 to 1½ hours.  
Lamb, well done, 15 minutes per pound.  
Beef, long or short fillet, 20 to 30 minutes.  
Beef, rolled rib or rump, 12 to 15 minutes per pound.  
Mutton, rare, 10 minutes per pound; well done, 15 minutes per pound.  
Veal, well done, 20 minutes per pound.  
Beef, sirloin, rare, 8 to 10 minutes per pound. Beef, sirloin, well done, 12 to 15 minutes per pound.

## Hints to Housekeepers.

Mould can be kept from a bookcase by scattering here and there drops of oil of lavender.

Brass kettles should be kept clean with salt and vinegar in order to avoid verdigris posion.

To keep a straw matting from turning yellow, wipe it with a cloth dipped in a mild brine and dry it with another cloth.

A rice pudding suitable for children is made by putting one pint of milk, one tablespoonful of rice and six raisins into a double boiler. Cover and cook for one hour. Remove the raisins and turn the mixture into a baking dish. Bake slowly for half an hour.

Rich starch used in laundering fine linens, cambrics and lawns is made from pulverized rice. It is mixed like ordinary starch, and French laundresses sometimes add a few drops of lavender or orris root to scent the dainty article to which they apply the starch.

To saute oysters, fry thin slices of bacon in a pan until the fat is tried out of it. Drain the oysters, dry them with a napkin and roll in flour that has been seasoned with salt and pepper. Remove the bacon and cover the bottom of the frying pan with the oysters. Fry them brown on both sides.

To make delicious tea punch, put one tablespoonful of Ceylon or India tea into a large pitcher, and pour over one quart of boiling water; cover the pitcher, and stand it aside for ten minutes; strain and add a pound of sugar, the juice of six lemons and two oranges. Stand this aside until very cold. When ready to serve add ice and Apollinaris. October Ladies' Home Journal.

To make chestnut salad shell a pint of large solid chestnuts; throw them into boiling water for five minutes, and remove the brown skins; then boil or steam until tender. When they are boiling put into a bowl a saltspoonful of salt, a dash of black pepper, onion sliced very thin; add four tablespoonfuls of olive oil, rubbing all the while, and then two tablespoonfuls of tarragon vinegar. Pour this over the chestnuts while they are hot; stand aside until very cold, and serve on lettuce leaves. Or the dish may be covered with finely chopped cress.

In cleaning a spot on a fabric with ether or chloroform it often happens that after the original stain is removed a circle is still to be seen. This comes from an impurity in the solvent used. Commercial ether or chloroform is not apt to be perfectly pure. In rubbing

the stain, therefore, a teacher of chemical cleaning advises that some absorbent like breadcrumbs or chalk or a piece of blotting paper should be put around the spot to absorb any excess of the liquid. Rub towards the spot to concentrate the liquid there, leaving the edge of the circle thin for quick absorption. The cleaning fluid, whatever it is, should not be left to dry itself, but rubbed dry with a succession of two or three cloths.

## Domestic Hints.

POTATO SALAD.—Make of equal proportions of cold boiled potato cut into dice, blanched English walnuts and stoned olives. The mixture is marinated with French dressing an hour before serving and chilled in the refrigerator during that time; a stiff mayonnaise being added, it is sent to the table. With this were handed round sandwiches of thin slices of bread spread with pate de foie gras.

SWEET POTATO CROQUETTES.—Bake the sweet potatoes until they are tender; then scoop out the centers and put them through a vegetable press. To each two cups of mashed potatoes allow a tablespoonful of butter, a level teaspoonful of salt, a tablespoonful of sugar and a half saltspoonful of white pepper; mix thoroughly. Form into cylinders, dip in egg, then in breadcrumbs and fry in smoking-hot fat.—October Ladies' Home Journal.

SPICED QUINCES.—Peel, core and quarter the quinces, weigh them and put into a preserving kettle with only enough water to prevent their burning, cover and let them cook over the back of the fire about twenty minutes. Into another kettle put for eight pounds of fruit four pounds of sugar, one ounce of stick cinnamon, half an ounce of whole cloves and one quart of vinegar. When this liquid is boiling turn in the quinces and let them cook until tender, but retain their shape. Skim out the fruit and put into a jar; then boil the liquid down to a rich syrup and pour over them.

BIRD'S-NEST PUDDING.—Pour one quart boiling water over one-half cup of pearl tapioca. Set it over the fire and cook rapidly a few minutes, stirring occasionally, then let it cook over boiling water until the tapioca is transparent. Add half a tablespoonful of salt. Core several thin-skinned apples, cut in halves, arrange them with the hollow side up in a round, earthen dish; fill the cavities with sugar and lemon juice. Pour the tapioca over them and bake in a hot oven until the apples are done. Let it cool a little before serving. Eat with sugar and cream.

POTATO SOUP.—Boil three or four potatoes and mash them. Make a paste of one tablespoonful of butter, half a tablespoonful of flour, a little chopped onion. Let the onion cook in the butter for a few moments before adding the flour. When the paste is cooked, add two cups of milk, making a thin white sauce. Add the mashed potatoes and strain the whole. Season with pepper and salt, reheat for a few moments just before serving, and add some chopped parsley and sippets of fried bread. If the soup is too thick, add more milk, or, best of all, a little beaten cream. If you wish it heartier yet, sufficient for a light meal, stir in the well beaten yolks of two eggs and serve.

COTTAGE CHEESE.—Put two gallons of sour (clabbered) milk into a granite or porcelain kettle, set over the fire, stirring constantly until about as warm as new milk, or until the whey separates from the curd. Have ready a colander over which you have laid a piece of strong cheesecloth. Pour in the warm milk, let it stand to drain, lifting the corners of the cloth occasionally to allow the whey to run out. Drain and press until perfectly dry. Add to the dry curd one pint of good cream (not necessarily perfectly sweet), a little salt and a dash of pepper if liked. Mix and rub through the colander, beat well, add more or less cream to taste. The milk must not become too warm, for if the curd is too hard it will not absorb the cream.



## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Oct. 17, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

	Nov.	Dec.
Wednesday.....	76 1/2 @ 75 1/4	77 1/2 @ 76 1/4
Thursday.....	76 1/2 @ 75 1/4	76 1/2 @ 75 1/4
Friday.....	75 1/2 @ 76	75 1/2 @ 76
Saturday.....	76 @ 75	76 1/2 @ 75 1/4
Monday.....	74 1/2 @ 73 1/4	75 1/2 @ 74 1/4
Tuesday.....	74 @ 74 1/4	74 1/2 @ 75 1/4

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

	Dec.	Feb.
Wednesday.....	6s 3 1/4 d	6s 4 d
Thursday.....	6s 2 3/4 d	6s 3 1/4 d
Friday.....	6s 2 1/2 d	6s 2 3/4 d
Saturday.....	6s 2 1/4 d	6s 2 1/2 d
Monday.....	6s 1 1/2 d	6s 2 d
Tuesday.....	6s 0 3/4 d	6s 1 1/4 d

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

	Dec., 1900.	May, 1901.
Thursday.....	1 02 1/4 @ 1 01 1/4	1 09 @ 1 06 1/4
Friday.....	97 1/2 @ 1 00 1/4	1 05 1/4 @ 1 06 1/4
Saturday.....	98 1/4 @ 97 1/2	1 04 1/2 @ 1 05
Monday.....	96 1/2 @ 97 1/4	1 03 1/2 @ 1 04 1/4
Tuesday.....	98 @ 97 1/2	1 04 1/2 @ 1 04 1/4
Wednesday.....	98 1/4 @ 99	1 05 1/4 @ 1 06

## WHEAT.

This market has been again suffering badly from the unmerciful hammering of bears in the speculative field. Advantage was taken of the absence of any noteworthy foreign demand, and prices were crowded down to low levels in Chicago and New York, in spite of the fact that foreign market part of the time showed upward tendency. December wheat was forced down in this center to 96 1/2c. on Monday, the previous Friday being the first time this season that above option descended below the dollar mark. There has been some recovery since Monday, but values at their best since last review make a poor showing as compared with prices of only a week ago. This is particularly the case as regards the speculative market. Breaks were not so pronounced, at least on the surface, in the spot market, due largely to inactivity, not only through very limited export demand, but to absence of any noteworthy pressure on the part of holders to realize. If sellers in the spot market had been numerous and anxious, lower levels of values than were commonly current for spot wheat would certainly have been established. The visible supply in this country east of the Rockies is reported for the week as showing an increase of 1,577,000 bushels.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, \$1.02 1/2 @ 97 1/4c.  
May, 1901, delivery, \$1.09 @ 1.03 1/2.

Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at 98 1/2 @ 99c.; May, 1901, \$1.05 1/2 @ 1.06.

California Milling..... \$1 02 1/4 @ 1 07 1/4

Cal. No. 1 shipping, alongside..... 97 1/2 @ 1 00

Oregon Valley..... 97 1/2 @ 1 00

Washington Blue Stem..... 1 02 1/4 @ 1 07 1/4

Washington Club..... 1 00 @ 1 05

Off qualities wheat..... 95 @ 97 1/4

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

	1899-1900.	1900-01.
Liv. quotations.....	6s 3 1/4 d @ 6s 4 d	6s 5 1/4 d @ 6s 6 d
Freight rates.....	36 1/4 @ 37s	42 1/4 @ 45s
Local market.....	\$1 07 1/4 @ 1 10	\$0 97 1/4 @ 1 00

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

A weak flour market is noted. While no official changes have been made in quotations, sales are being made 10 @ 15c. per barrel less than would have been accepted for same brands a few weeks ago. Considerable flour has lately gone forward to China, but it was arranged for some time previous and had no effect on the immediate market.

Superfine, lower grades.....	\$2 25 @ 2 50
Superfine, good to choice.....	2 60 @ 2 80
Country grades, extras.....	3 15 @ 3 40
Choice and extra choice.....	3 40 @ 3 65
Fancy brands, jobbing.....	3 60 @ 3 75
Oregon, Bakers' extra.....	2 90 @ 3 25
Washington, Bakers' extra.....	2 90 @ 3 40

## BARLEY.

The market for Feed descriptions has been slow and weak, with offerings of this sort of rather heavy proportions. Stocks of Chevalier have been reduced to light volume, and offerings of this variety of desirable quality could be placed to fair

advantage. Brewing of high grade is not being offered in heavy quantity, nor is any special selling pressure being manifested on barley of this sort. Two more cargoes of barley were cleared this week for Europe. Close to 60,000 tons have been forwarded outward thus far this season, but last year's shipments for corresponding time exceeded above quantity about 50 per cent.

Feed, No. 1 to choice.....	70 @ 72 1/4
Feed, fair to good.....	65 @ 67 1/4
Brewing, No. 1 to choice.....	80 @ 85
Chevalier, No. 1 to choice.....	97 1/4 @ 1 02 1/4
Chevalier, No. 2.....	85 @ 90
Chevalier, poor.....	70 @ 75

## OATS.

With continued good demand, both on Government and local account, firmness continues a pronounced feature of the market, especially for choice to select qualities. Arrivals of all descriptions the current week have been only moderate and spot stocks are of tolerably small compass. A German transport sailing this week for the Orient took 6,545 centals.

White Oats, fancy feed.....	1 35 @ 1 40
White, good to choice.....	1 27 1/4 @ 1 32 1/4
White, poor to fair.....	1 17 1/4 @ 1 25
Gray, common to choice.....	1 30 @ 1 30
Milling.....	1 35 @ 1 42 1/2
Surprise, good to choice.....	1 35 @ 1 45
Black Russian.....	1 10 @ 1 25
Red.....	1 12 1/4 @ 1 30

## CORN.

Market is lightly stocked and unfavorable to buyers. Present supplies are almost wholly Eastern product, and are in the hands of local millers and jobbers, having been purchased previous arrival.

Large White, good to choice.....	1 22 1/4 @ 1 25
Large Yellow.....	1 30 @ 1 22 1/4
Small Yellow.....	1 50 @ —
Eastern, in bulk (carload lots).....	1 15 @ 1 17 1/4

## RYE.

There is a fair business doing in this cereal, mostly for export, but at rather low figures.

Good to choice, new.....	87 1/4 @ 92 1/4
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## BUCKWHEAT.

Stocks continue insignificant and values are poorly defined, but there is a decidedly firm tone to the market.

Good to choice.....	1 85 @ 2 10
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## BEANS.

New beans have been coming forward quite freely, mainly Lady Washingtons, Bayos and Pinks. While the market was more active than last week and inclined less against sellers, firmness was most pronounced in white varieties of beans. Limas are ruling firmer, under light offerings.

Pea, fair to good, 100 lbs.....	3 75 @ 4 00
Small White, good to choice.....	3 50 @ 3 75
Lady Washington.....	2 40 @ 2 60
Pinks.....	1 90 @ 2 25
Bayos, good to choice.....	1 85 @ 2 10
Reds.....	2 75 @ 3 00
Limas, good to choice.....	5 20 @ 5 30
Black-eye Beans.....	2 50 @ 2 75
Horse Beans.....	1 75 @ 2 00
Garbanzos, large.....	2 00 @ 2 25
Garbanzos, small.....	1 25 @ 1 75

Recent advices by mail from New York give the following report of the bean market, prices quoted being per 60-lb. bushel:

Further changes in values have been necessary this week as a result of the shortness of supply and urgent requirements of the trade. Some increase has been noted in receipts, but the stock was absorbed quickly, generally before it was unloaded, and much of the time there was practically no available stock to trade on.

Orders that have come in from out-of-town have frequently had to lay over or go unfilled. It has been a peculiar situation and one not often experienced at this season of year. How long before there will be a radical change no one can tell. Every jobbing house here and at other points was practically out of stock, and, with the fall trade coming on, it seems probable that everything to come in for the next two or three weeks will be wanted. The quality of the beans grown this year makes picking necessary, and dealers report difficulty in securing pickers. Besides this, farmers are busy with other crops and are not taking the time to thresh out beans. Marrow have shown most improvement, recent sales being at \$2.40, and the market closing firm at that.

There are absolutely no Medium to be had at the moment. Five or six cars of Pea have gone to the trade during the week; part were sold to arrive below quotation, but anything offered on the market brought \$2.10 easily. Stocks of Red Kidney are small and best lots command \$2.25. Only a few White Kidney here. Eastern trade has called for Yellow Eye and price was run up to \$2.25. A few jobbing sales of Turtle Soup at \$1.85. Lima have been selling on arrival at \$3.60. Scotch peas have made a sharp advance under light supplies and higher prices in the West, and green have also worked upward a little.

## DRIED PEAS.

Scarcely anything doing in this line, owing to almost entire absence of offerings and not to lack of inquiry.

Green Peas, California.....	2 25 @ 2 75
Niles Peas.....	2 60 @ —

## WOOL.

Market shows the same inactivity previously noted, with nothing to warrant anticipating any material revival of trade during the balance of the current month. Manufacturers are known to be almost bare of stocks, and still they decline to purchase, except as absolutely compelled to. It is believed there will be a revival of trade after the election, but whether values will tend up or down will depend much on who is the most anxious to do business, the grower or the manufacturer. The foreign markets have lately shown fairly healthy condition.

## SPRING.

Humboldt and Mendocino.....	16 @ 17
Northern, free.....	14 @ 15
Northern, defective.....	12 @ 13
Middle Counties, free.....	14 @ 15
Middle Counties, defective.....	11 @ 13
Southern, 12 mos.....	8 @ 10
Southern, free, 7 mos.....	9 @ 11
Southern, defective, 7 mos.....	8 @ 9
Oregon Valley, fine.....	17 @ 18
Oregon Valley, coarse to medium.....	16 @ 17
Eastern Oregon, choice.....	13 @ 16
Eastern Oregon, fair to good.....	10 @ 12
Nevada, as to condition.....	11 @ 15

## FALL.

Middle County.....	9 @ 10
San Joaquin.....	7 @ 9
San Joaquin Lambs.....	8 @ 9

## HOPS.

Values remain quotably in same position as previously noted, but there is no active movement at current figures, nor can the market be termed strong. Exceptionally choice hops are commanding 14c in a moderate way, while other lots which on a strong market would readily pass for best, will not command top price. While the quality this season is above the average, there are a good many hops which show premature picking or poor curing, and such have to go at low figures to secure custom.

Good to choice 1900 crop.....	11 @ 14
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The following review of the hop market is from a New York authority, and is furnished by mail of late date:

It is rather a peculiar situation that meets the trade at the present time. We have grown less hops in this country than last year, England is very much short of 1899 and the holdings here in brewers' hands are much below a year ago; but, in spite of these conditions, buyers are showing great indifference and the volume of business is comparatively small. Confidence is felt in the future of the market, however, and no one seems inclined to hurry matters. No considerable quantity of the New York State crop has been moved as yet. We think if more of the hops were pressed more business would result, but growers have had great difficulty in getting sacking. A vessel is now due with a fair supply of burlap, and the shortage of hop cloth will probably be relieved soon. Growers are asking 14 @ 15c. generally; some of the finer lots are held higher and only occasional growths are picked up below the inside figure. A number of the California hops are passing through here on direct shipments to London—nearly 900 bales this week—but not much of the stock is shown on this market, and there has been rather limited opportunity of judging of the quality. Advices from California indicate that more than half of the crop has already passed out of first hands. The yield there is placed at 35,000 to 37,000 bales. We have some reports of mold in the last pickings from Washington. From very full reports published by the Kentish Observer of England, under date of Sept. 26, it does not appear that the English crop, which has just been harvested, is more than one-half of last year's yield.

## HAY AND STRAW.

The hay market shows decided firmness, and prospects are favorable for sellers being able to unload to at least fully as good advantage during the balance of the season as during the past few weeks. Demand continues good on both foreign and local account. A German transport departing this week for the Orient took 7913 bales. The advance quoted herewith for Straw is being well maintained.

Wheat.....	9 00 @ 13 50
Wheat and Oat.....	9 00 @ 12 50
Oat.....	8 00 @ 12 50
Barley.....	7 00 @ 9 00
Volunteer.....	6 00 @ 7 50
Alfalfa.....	7 00 @ 8 50
Stock.....	5 50 @ 7 00
Compressed.....	9 00 @ 13 00
Straw, 1/2 bale.....	35 @ 45

## MILLSTUFFS.

Bran market was quiet, with supplies of fair volume, but there was no appreciable

change in quotable rates. Middlings were held about as last quoted. Tendency on Rolled Barley was to easier rates. Milled Corn was quite steadily held, with stocks of light volume.

Bran, 1/2 ton.....	15 50 @ 16 50
Middlings.....	17 50 @ 20 00
Shorts, Oregon.....	16 00 @ 17 00
Barley, Rolled.....	15 50 @ 16 00
Cornmeal.....	28 00 @ —
Cracked Corn.....	27 00 @ —

## SEEDS.

Flaxseed is coming forward in considerable quantities from the North, mostly under contract or representing purchases of the oil works. Mustard Seed is hardly quotable, most of the last crop, which was small, having passed out of first hands. Alfalfa Seed is inquired for, with practically none here, and prices asked in Utah above the views of buyers in this market.

Mustard, Trieste.....	4 00 @ —
Mustard, Yellow.....	5 00 @ —
Flax.....	2 00 @ 2 50
Canary.....	3 1/4 @ 4
Rape.....	2 @ 3
Hemp.....	3 1/4 @ 4

## BAGS AND BAGGING.

Not much doing in this market, as is customary at this season of the year. For the little inquiry which exists there are ample stocks of all descriptions. Quotable values remain in same position as at date of last report.

Calcutta Grain Bags, buyer June-July.....	— @ —
Calcutta Grain Bags, spot.....	5 1/2 @ —
San Francisco Grain Bags, 22x36, spot.....	5 1/2 @ 5 1/2
State Prison Bags in lots of 2000, 1/2 100.....	5 65 @ —
Wool Sacks, 4 lbs.....	— @ 32 1/2
Wool Sacks, 3 1/2 lbs.....	— @ 28 1/2
Fleece Twine.....	7 1/2 @ —
Gunnies.....	— @ 12 1/2
Bean Bags.....	4 1/2 @ 5 1/2
Fruit Sacks, cotton.....	6 1/2 @ 7 1/2

## HIDES, PELTS AND TALLOW.

The Hide market is fairly steady, but the demand is not brisk at full current rates. Pelts are moving slowly, the market lacking in firmness. Tallow is in fair request at current values, both for shipment and on local account.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

	Sound.	Culls.
Heavy Steers, over 56 lbs.....	9	8
Medium Steers, 48 to 56 lbs.....	8½	7½
Light Steers, under 48 lbs.....	8	7
Heavy Cow Hides, over 50 lbs.....	8	7
Light Cow Hides, under 50 lbs.....	8	7
Wet Salted Kip.....	8	7
Wet Salted Veal.....	8	7
Wet Salted Calf.....	9	8
Dry Hides.....	15	12
Dry Kip and Veal, 11 to 16 lbs.....	15	12
Dry Calf, under 4 lbs.....	15	12
Salted Horse Hides, large.....	2 00 @	—
Salted Horse Hides, medium.....	1 50 @	—
Salted Horse Hides, small.....	1 00 @	—
Dry Horse Hides, large.....	1 50 @	—
Dry Horse Hides, small.....	75 @	1 00
Dry Colts' Hides.....	50 @	—
Pelts, long wool, ¾ skin.....	75 @	1 00
Pelts, medium, ¾ skin.....	50 @	70
Pelts, short wool, ¾ skin.....	30 @	40
Pelts, shearling, ¾ skin.....	15 @	25
Deer Skins, best summer.....	27½ @	30
Deer Skins, good medium.....	20 @	22½
Deer Skins, thin winter.....	— @	10
Elk Hides.....	10 @	12
Tallow, good quality.....	4 @	—
Tallow, No. 2.....	3 @	3½
Goat Skins, perfect.....	30 @	37½
Goat Skins, damaged.....	10 @	20
Kid Skins.....	5 @	10

## HONEY.

Stocks of all descriptions are light, and especially is Water White scarce, the latter being hardly quotable. Stocks of Amber Comb are of fair volume for an off year. Former quotations remain in force, with market decidedly firm for all desirable stock.

Extracted, White Liquid.....	7 1/2 @ 8
Extracted, Light Amber.....	6 1/2 @ 7 1/2
Extracted, Amber.....	5 1/2 @ 6 1/2
White Comb, 1 lb frames.....	13 @ 14
Amber Comb.....	11 1/2 @ 12 1/2
Dark Comb.....	8 @ 9

## BEESWAX.

There is little offering, either in the way of spot supplies or to arrive. There is a good demand at current rates.

Good to choice, light, 1/2 lb.....	26 @ 28
Dark.....	24 @ 26

## LIVE STOCK AND MEATS.

Beef is ruling steady, there being a very fair demand at current values. Mutton has been selling at slightly firmer figures. Lamb was quotably higher, and the tendency was to stiffer prices. Veal was in fair supply and market was barely steady. Demand for Hogs at reduced rates was not very brisk, owing to Eastern markets being lower and against sellers.

Beef, first quality, dressed, net 1/2 lb.....	6 @ —
Beef, second quality.....	5 1/2 @ —
Beef, third quality.....	5 @ —



Mutton—ewes, 6½@7c; wethers.....	6½@ 7½
Hogs, bard grain fed, medium.....	5½@ 5½
Hogs, small, fat.....	5½@ 5½
Hogs, large, bard.....	5½@—
Hogs, feeders.....	5 @ 5½
Hogs, country dressed.....	6½@ 7
Veal, small, ½ lb.....	6 @ 8½
Veal, large, ½ lb.....	7 @ 8
Lamb, spring, ½ lb.....	8 @ 8½

POULTRY.

Prices have not changed radically since last review, but have averaged lower, especially for Turkeys and large Young Chickens. The demand was fair, but owing to liberal receipts of Eastern, prices were kept at a low range. Seven carloads of Eastern were landed here in past three days.

Turkeys, live hens, ½ lb.....	14 @ 15
Turkeys, live gobblers, ½ lb.....	14 @ 15
Turkeys, Old, per lb.....	11 @ 12½
Hens, California, ½ dozen.....	3 50 @ 4 50
Roosters, old.....	3 50 @ 4 00
Roosters, young (full-grown).....	3 50 @ 4 50
Fryers.....	3 00 @ 3 50
Broilers, large.....	3 00 @ 3 25
Broilers, small.....	2 25 @ 2 50
Ducks, old, ½ dozen.....	3 00 @ 4 00
Ducks, young, ½ dozen.....	3 50 @ 4 50
Geese, ½ pair.....	1 25 @ 1 50
Goats, ½ pair.....	1 50 @ 1 75
Pigeons, old, ½ dozen.....	1 00 @ 1 25
Pigeons, young.....	1 50 @ 2 75

BUTTER.

The market for fresh butter has been quiet, and, for other than special brands in high repute, has lacked firmness. Much of the trade is now on held and packed butter, of which the principal retailers have fair supplies of their own carrying. Cold storage squares and rolls are gaining steadily in favor for city trade, as against pickled roll and solid packed.

Creamery, extras, ½ lb.....	28 @—
Creamery, firsts.....	26 @ 27
Creamery, seconds.....	24 @ 25
Dairy, select.....	25 @ 26
Dairy, seconds.....	21 @ 23
Dairy, soft and weedy.....	— @—
Mixed store.....	16 @ 17
Creamery in tubs.....	20 @ 22
Pickled Roll.....	20 @ 21
Firkin, California, choice to select.....	30 @ 21
Firkin, common to fair.....	17 @ 18

CHEESE.

There is not much mild-flavored new of high grade now on market, and such is selling to fair advantage. Limited quantities of favorite marks are selling above quotations. Held cheese is ruling steady, but is in ample supply for immediate needs.

California, fancy flat, new.....	11 @ 11½
California, good to choice.....	10 @ 11
California, fair to good.....	9½ @ 10
California Cheddar.....	— @—
California, "Young Americas".....	10 @ 12½

EGGS.

Fancy fresh were scarce and high, but only such as were strictly select in every respect could be relied on to command full current figures. Eggs which were irregular as to quality, size and color, had to sell down close to the figures ruling on cold storage stock. There was no scarcity of the latter, either of local product or Eastern.

California, select, large, white and fresh.....	38 @—
California, select, irregular color & size.....	32½ @ 37½
California, good to choice store.....	25 @ 30
Eastern, as to section and grading.....	20 @ 26
Eastern, cold storage.....	— @—

VEGETABLES.

The display of tender vegetables is narrowing down to the usual limited proportions experienced at this time of year, but is still fair, all things considered. Market for choice Peas, String Beans and the like inclined in favor of the seller. Onions were in increased receipt, but were in the main steadily held. Garlic was scarce and high. Tomatoes brought improved figures.

Beans, String, ½ lb.....	2 @ 3
Beans, Wax, ½ lb.....	2 @ 3
Beans, Lima, ½ lb.....	2 @ 3
Cabbage, choice garden, ½ 100 lbs.....	1 00 @ 1 25
Cauliflower, ½ dozen.....	50 @—
Cucumbers, Bay, ½ box.....	25 @ 50
Egg Plant, ½ box.....	35 @ 60
Garlic, ½ lb.....	4 @ 5
Onions, Yellow Danver, ½ cental.....	55 @ 70
Okra, Green, ½ box.....	40 @ 65
Peas, Sweet, garden, ½ lb.....	3 @ 4
Peppers, Green Chile, ½ box.....	30 @ 50
Peppers, Bell, ½ lb.....	35 @ 65
Squash, Summer, ½ large box.....	75 @ 1 00
Tomatoes, River, ½ large box.....	40 @ 65

POTATOES.

Receipts of potatoes have been heavy and excessive most of the week, the Sacramento river district furnishing the bulk of supplies. The market was naturally soft, concessions to buyers being of common occurrence. The shipping demand has not been brisk the past week or two, and local requirements do not make much impression on stocks. Sweets were offered quite freely and were lower, choice Merced going in carload lots at \$1 per cental.

Burbanks, River, ½ cental.....	35 @ 50
Burbanks, Salinas, ½ cental.....	75 @ 1 10
Sweet Potatoes, Yellow, ½ cental.....	75 @ 1 00

The Fruit Market.

Apples may be said to be the most prominent at present in the market for fresh fruits, taking the lead certainly as to the quantity offering. Choice to fancy Apples are not, however, in heavy stock, nor are they likely to be at any time during the season. Market is firm for high-grade fruit, such being in good request. Common qualities were salable only at a low range of prices, having to depend largely for an outlet on a class of buyers who look more to price than to quality. Peaches are coming forward in very light quantity, and include few choice, the only sort especially inquired for. Pears of the late varieties were in fair supply, and desirable qualities met with tolerably good custom at much the same range of prices as last quoted. Winter Nelis in fine condition were in favor. Grapes of table varieties are still arriving quite freely, but a considerable percentage of offerings shows defects, causing a more than ordinarily wide range in values. Watermelons, Cantaloupes and Nutmegs were in slim receipt, and will soon be wholly out of stock. Berries did not make much of a display, neither was the inquiry for them of an active character.

Apples, fancy, 4-tier box.....	1 00 @ 1 25
Apples, good to choice, ½ 50-lb box.....	80 @ 90
Apples, common to fair, ½ 50-lb box.....	25 @ 50
Apples, Crab, ½ box.....	— @—
Blackberries, ½ chest.....	6 00 @ 7 00
Cantaloupes, ½ crate.....	1 00 @ 1 50
Figs, ½ 1-layer box.....	50 @ 75
Figs, ½ 2-layer box.....	1 00 @ 1 50
Grapes, Tokay, ½ box.....	30 @ 65
Grapes, Seedless Sultana, ½ crate.....	— @—
Grapes, Isabella, ½ crate.....	— @—
Grapes, Rose of Peru, ½ box.....	30 @ 65
Grapes, Black Hamburg, ½ box.....	30 @ 65
Grapes, Zinfandel, per ton.....	22 00 @ 27 00
Grapes, Muscat, ½ box.....	30 @ 65
Raspberries, ½ chest.....	5 00 @ 7 00
Nectarines, Red, ½ box.....	— @—
Nectarines, White, ½ box.....	— @—
Nutmeg Melons, ½ crate.....	50 @ 1 00
Plums, Coe's Late Red, ½ box.....	40 @ 65
Plums, fancy, ½ box.....	— @—
Prunes, ½ crate.....	— @—
Peaches, ½ box.....	40 @ 75
Peaches, wrapped, ½ box.....	75 @ 90
Peaches, Ching, ½ ton.....	— @—
Peaches, Freestone, ½ ton.....	— @—
Pears, Winter Nelis, ½ box.....	75 @ 1 00
Pears, common kinds, ½ box.....	30 @ 75
Persimmons, ½ box.....	65 @ 90
Pomegranates, ½ small box.....	50 @ 75
Pomegranates, ½ orange box.....	1 50 @ 2 00
Quinces, ½ box.....	25 @ 50
Strawberries, Longworth, ½ chest.....	8 00 @ 10 00
Strawberries, Large, ½ chest.....	3 00 @ 5 00
Whortleberries, ½ lb.....	5 @ 7
Watermelons, ½ 100.....	5 00 @ 15 00

DRIED FRUITS.

The market for cured and evaporated fruits shows peculiar condition. Packers are nearly all busy, some of them working night and day, in filling back orders for assorted carloads for various parts of the country. They have been in receipt of so many telegrams lately from buyers, wanting to know why their orders, calling perhaps for first half of October or early October shipment, have not been delivered, that they have virtually stopped paying attention to these telegraphic prods, aware that they are doing their utmost to dispatch the goods as promptly as possible. In spite of this pressure to fill orders, and the eagerness of buyers to secure fruit contracted for early in the season, the market is dull so far as traffic in offerings of nearly all kinds of dried fruit from first hands is concerned. Packers are working mainly on their own stocks, and when compelled to purchase, it is mostly in such small quantities, or in certain sections noted for producing certain qualities, that there is no impression of business among the majority of producers or holders depending on packers for a market. Quotations remain about as last noted, but are for the time being largely nominal. Under selling pressure, these figures could not be realized, while on active buying full quotations would have to be paid, and possibly a little more where exceptionally desirable qualities were sought after. Apricots are in light stock and in consequence show steadiness. Peaches and Pears are still offering in liberal quantity from first hands. Custom is being sought for Apples, Plums and Figs, especially common qualities, in sufficient quantities to admit of wholesale transactions. Business in Prunes is reported fair, but is said to be largely in fruit outside of the Association, which is offering just enough under Association rates to make it an object for buyers to take these goods. If the Association's estimates of these outside stocks are correct, they should be very soon wiped out.

EVAPORATED OR BLEACHED.

Apricots, Royal, prime.....	6½ @ 7
Apricots, Royal, choice, in sacks, ½ lb.....	7½ @ 8
Apricots, Royal, fancy.....	9 @—
Apricots, Moorpark.....	9½ @ 11½
Apples, in 50-lb boxes, rings, pressed, fancy.....	5½ @ 5½
Apples, 50-lb boxes, rings, pressed, good to choice.....	4½ @ 4½

Figs, White, fancy pressed.....	6 @ 7
Nectarines, ½ lb.....	4 @ 6
Peaches, unpeeled, fancy.....	6 @ 6½
Peaches, unpeeled, choice.....	5 @ 5½
Peaches, peeled, in boxes.....	11 @ 14
Pears, unpeeled Bartlett's, halved, fancy.....	6 @ 6½
Pears, halved, unpeeled Bartlett's.....	5 @ 5½
Pears, quartered, unpeeled Bartlett's.....	4½ @ 5½
Plums, Black, pitted.....	4½ @ 5½
Plums, White and Red.....	5½ @ 6½
Prunes, Silver.....	4½ @ 6

COMMON SUN-DRIED.

Apples, sliced.....	3 @ 3½
Apples, quartered.....	3 @ 3½
Figs, Black.....	2 @ 2½
Figs, White.....	3 @ 3½
Peaches, unpeeled.....	4 @ 5

Prices for new crop Prunes, as named by the California Cured Fruit Association: Santa Clara four sizes, 3c. per lb.; 40-50s, 7c.; 50-60s, 5½c.; 60-70s, 3½c.; 70-80s, 3¼c.; 80-90s, 2¾c.; 90-100s, 2¼c.; 100-120s, 2c., which is the uniform price for this grade; Sonomas, other than smallest, ¼c. less; other districts, ¼c. less, except for smallest; Ruby, ¼c. premium.

Mail advices of recent date from New York give the following review of the Eastern dried fruit market:

New evaporated apples are in fair supply and meeting a very moderate demand; two or three cars of prime have been taken at 4½c., and better quality has sold in a small way at the higher figures quoted. Several cars have been rejected, and much complaint is heard relative to poor drying; makers are evidently hurrying their stock forward without properly drying it, and the result is that the market is burdened with poor fruit which lacks keeping qualities, and which must be forced out promptly regardless of value. Strictly prime stock which can be guaranteed to maintain its color and quality, would command 4½c. readily, and contracts are still making for future delivery on that basis, though November and December delivery stock could probably be obtained fractionally lower. Sun-dried apples in light supply and moving slowly at about figures quoted. Comparatively few old evaporated and scarcely any sun-dried apples remain. Old chops and waste still plenty but very poor in quality and of low and uncertain value; stock is selling to arrive at \$1.25 for chops and \$1 for cores and skins, though latter for early delivery could be purchased at 95c. Further sales of Northwestern quarters have been made to arrive at 4c. for palme and 4½c. for choice. Raspberries have further advanced with some sales above quotations. Blackberries firmer and generally held at 5c. Very few cherries available, and market practically bare of huckleberries with quotations nominal. California apricots quiet and slightly easier. Peaches meeting a fair demand on the basis of 8@9c. for fancy, 7½@8c. for choice and 7@7½c. for ordinary stock in boxes, with bags worth about ½c. less. New prunes commencing to arrive and not receiving much attention; 90's to 100's quoted at 3½@4c., 80's to 90's, 4½@4½c.; 70's to 80's, 4½@5c., and 60's to 70's, 3½@5½c.

Apricots, Cal., Moorpark, 1900.....	9 @ 14
Apricots, Cal., Royal, 1900, ½ lb.....	8 @ 8½
Peaches, Cal., unpeeled, 1900, in bxs, ½ lb.....	7 @ 9
Peaches, Cal., unpeeled, 1900, in bags, ½ lb.....	7 @ 8½
Prunes, Cal., ½ lb.....	3½ @ 7½

RAISINS.

The Raisin market shows healthy condition. The season's yield will not exceed 3,600 carloads, and fully two-thirds of the crop has been already placed. The quality throughout is averaging fine. Seedless Sultanas and Thompson Seedless are commanding more than quotations and are so scarce as to be hardly quotable.

F. O. B. FRESNO DELIVERY.—CARLOAD LOTS.

Imperial Clusters, 6-crown, ½ 20-lb box.....	3 00 @—
Dehesa Clusters, 5-crown.....	2 50 @—
Fancy Clusters, 4-crown.....	2 00 @—
London Layers, 3-crown, ½ box.....	1 60 @—
do do 2-crown, ½ box.....	1 50 @—
(Usual advance for fractions.)	
Loose Muscatel, 4-crown standard, ½ lb.....	— @ 7
Loose Muscatel, 3-crown.....	— @ 6½
Loose Muscatel, 2-crown standard.....	— @ 6
Loose Muscatel, seedless.....	— @ 6½
(Above prices for loose raisins are for 50-lb boxes.)	

Thompson Seedless.—Bleached fancy, ½ lb, 12c; choice, 11c; standard, 10c; prime, 9c. Unbleached, 9c.

Sultanas.—Bleached fancy, ½ lb, 10½c; choice, 9½c; standard, 8½c; prime, 8c. Unbleached, 8c.

CITRUS FRUITS.

Oranges are in moderate stock and are offering at unchanged rates but are not meeting with much inquiry. Lemons are quotably lower, and a much greater demand than exists could be accommodated out of existing spot supplies. Limes are plentiful and cheap and are interfering with the advantageous sale of Lemons.

Oranges—Navel, ½ box.....	3 00 @ 4 50
Valencia, ½ box.....	— @—
Seedlings, ½ box.....	— @—
Lemons—California, select, ½ box.....	2 75 @—
California, good to choice.....	1 75 @ 2 50
California, common to fair.....	75 @ 1 50
Limes—Mexican, ½ box.....	4 00 @ 4 50
California, small box.....	50 @ 75

Buswell Paints.

Best for Durability.



75c.

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PER GALLON.

COLOR CARD AND BOOKLET SENT FREE.

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Manufacturers, 31 Market St., San Francisco. 902 Broadway, Oakland.

MOORE, FERGUSON & CO.

WOOL, GRAIN, FLOUR

—AND—

General Commission Merchants, 310 CALIFORNIA ST., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

NUTS.

The firmness previously noted continues to prevail in the market for both Almonds and Walnuts. Most of this season's Almonds have already passed into the hands of jobbers and retailers. The Walnut crop is being rapidly moved, and an early clean up of stocks is looked for.

California Almonds, shelled.....	24 @ 27
California Almonds, paper shell, ½ lb.....	13 @ 15
California Almonds, soft shell.....	10½ @ 12½
California Almonds, hard shell.....	7 @ 8
Walnuts, White, soft shell.....	8½ @ 10½
Walnuts, White, California, standard.....	7½ @ 10
Chestnuts, California Italian.....	10 @ 12½
Peanuts, California, fair to prime.....	5 @ 6
Peanuts, Eastern, hand-picked.....	6 @ 6½
Pine Nuts.....	5 @ 6

WINE.

The conditions of the wine market remain practically the same as at date of last report. Prices for new wine continue undetermined, and it may be a month or more before values for this year's product will be sufficiently established to enable giving quotations. Grapes are still on market, but not in very heavy quantity, and the season will soon be ended, so far as wholesale offerings of wine grapes are concerned. The quotable range for dry wine grapes in this center is \$20@27 per ton, as to variety and condition. Prices in the interior are relatively firmer in some districts than here.

Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

FOR THE WEEK.	Since July 1, 1900.	Same time last year.
Flour, ¼ sacks.....	168,300	1,696,174
Wheat, centals.....	194,376	1,484,880
Barley, centals.....	57,330	1,763,079
Oats, centals.....	27,430	320,645
Corn, centals.....	4,430	21,365
Rye, centals.....	17,860	88,042
Beans, sacks.....	29,452	100,787
Potatoes, sacks.....	33,898	443,349
Onions, sacks.....	5,676	85,828
Hay, tons.....	3,946	66,901
Wool, bales.....	1,480	13,445
Hops, bales.....	461	3,541

EXPORTS BY SEA.

FOR THE WEEK.	Since July 1, 1900.	Same time last year.
Flour, ¼ sacks.....	88,480	831,028
Wheat, centals.....	197,035	1,397,425
Barley, centals.....	64,434	1,082,484
Oats, centals.....	19	34,114
Corn, centals.....	—	5,039
Beans, sacks.....	112	5,713
Hay, bales.....	10	49,402
Wool, pounds.....	—	233,621
Hops, pounds.....	42,241	205,035
Honey, cases.....	2	1,341
Potatoes, packages.....	3,112	23,240

California Dried Fruit at New York.

NEW YORK, Oct. 17.—Evaporated apples, common, 3@4c; prime wire tray, 4½@5½c; choice, 5½@6c; fancy, 6@6½c.

California dried fruits. — Market remains quiet and values are without appreciable change.

Prunes, 3¼@3½c.  
Apricots, Royal, 11@14c; Moorpark, 15@17c.  
Peaches, unpeeled, 6@9c; peeled, 16@20c.



### Use Made of Some Metals.

With lead by far the greater portion is converted into white lead, red lead and orange material, which are used as pigments of paints, distributed over great surfaces in such thin coatings that their metallic contents is practically never recovered. A good deal of lead is manufactured into sheet, and a considerable proportion into bullets, shot and other projectiles; and, though still remaining in a metallic form, it is so widely distributed in use as to cause it to be irrecoverable in the form of scrap. A portion of the lead product used as sheet lead and pipe does come back into the market, but the portion of lead used in these ways is comparatively small as compared with the other uses of the metal.

The consumption of zinc is largely in galvanizing steel or iron sheets, in the manufacture of brass, as sheet zinc, and as the oxide of zinc used as a pigment in paint. That portion of the metal which is used in galvanizing is distributed as a thin covering over a large surface of iron, and the metal is entirely lost in the oxidizing and general disintegration of the zinc sheet. It has never been attempted to recover the zinc from galvanized iron. Zinc which is manufactured into brass, in the proportion of one-third zinc to two-thirds copper, remains in a permanent form, which is often available for new use as scrap brass, and, next to iron and steel, is the largest commodity in the scrap metal market.

The major portion of the tin product of the world is used in covering tin plates. Ordinary tin plates carry 1½% to 3½% of tin. Many attempts have been made to recover this tin from old tin scrap, but no considerable amount of metal has thus returned to the markets of the world as recovered from tin scrap up to the present time.

Of the common metals next to iron and steel, copper is the one which is used to the largest extent in the metallic form, only a small proportion of the production being utilized in the salts of copper, blue vitriol (the salt of copper used in galvanic batteries) being the principal salt of the metal sold in the market. The great uses of copper are in the manufacture of brass, of which it forms a two-thirds component part ordinarily, and in electrical conductors and in the form of sheet used in roofing, the bottoms of cooking and other utensils, in the manufacture of pipes to be used where a considerable amount of elasticity and pliability are required. The proportion of scrap copper for sale in the market is greater than that of any other metals, with the exception of iron and steel; but the total amount of old copper offered for sale is comparatively insignificant compared with the total copper production.

### Man, Muscle and Coal.

The fact that the new steamer Deutschland develops power at the rate of 1 H. P. hour for each one and one-half pounds of coal consumed has been said to be the greatest development of marine boilers and engines. Static power producers have done even better than this. At the Edison power plant power has been developed at the rate of 1 H. P. hour for each pound of coal consumed. A few equations from this starting point would lead to:

One pound coal equals 1 H. P. hour.

Two thousand pounds coal equals 2000 H. P. hours.

Two thousand pounds coal equals 200 H. P. days of ten hours each.

One H. P. hour equals 14 M. P. hours.

Two thousand pounds of coal equals 2800 M. P. days of ten hours each.

Two thousand pounds coal equals 9 M. P. years of 311 days each.

Value of 2000 pounds coal, excluding transportation \$1 to \$10, according to locality.

Annual production of coal in the United States, 240,000,000 net tons.

Potentiality in man power years of 240,000,000 tons of coal, 2,160,000,000 years.

Estimated number of male producers in the United States, 20,000,000.

Ratio between 20,000,000 male workers and the potentiality of 240,000,000 tons of coal, 1 to 108.

That is to say, 20,000,000 workers without the aid of coal, would have to labor 108 years to develop a force equal to the potential energy of the present annual production of coal in the United States.

If two clocks on the same shelf have their pendulums adjusted to swing in exact unison, and one of them is set to running, in the course of time the other will start up in sympathy. Each sound impulse caused by the vibration of the pendulum of the clock that is running is communicated to the other pendulum. Each successive impulse adds to the swing of the sympathetic pendulum, which began in an exceedingly small way at the very first stroke of the other pendulum, and this goes on till the sympathetic pendulum is making its full stroke. So with sympathetic tuning forks. Each air wave that is sent out by the initial fork strikes the other fork and causes at first a slight vibration, which accumulates, because each successive air wave strikes the sympathetic fork just at the end of its swing and works in

harmony with the natural tendency of the fork to vibrate. The result is a co-operation. Each helps the other. How much better it would be for the world if men could pattern after this law of physics.

### Of Increasing Use.

The automobile or "locomobile," as it is sometimes styled, is becoming a familiar object in the streets of many principal cities. Like the bicycle, it is evolutionary, and there are constant improvements. Among those noted are the styles furnished by the Locomobile Co., a self-propelling steam-motor vehicle, with little noise and no odor or vibration. The body contains the boiler, engine, gasoline and water tanks. The gasoline is carried in

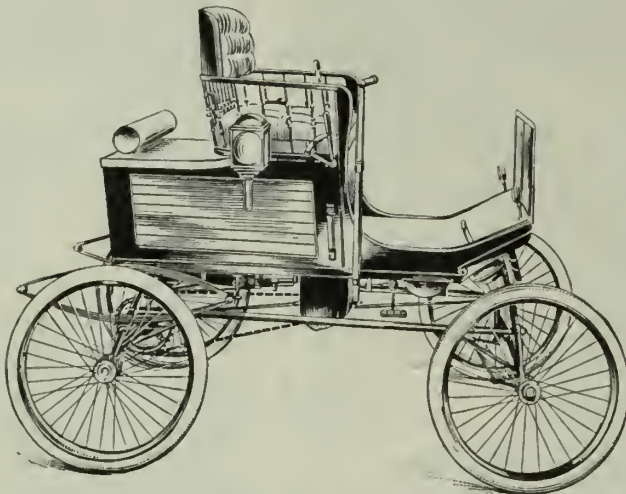


Fig. 1.—Style 2, "Runabout."



Fig. 2.—Style 3, Victoria Top.

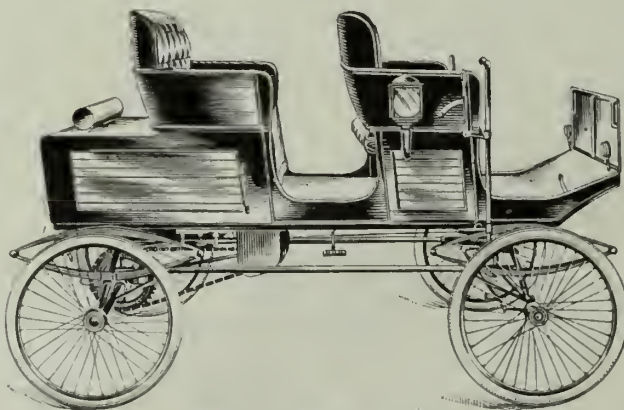


Fig. 3.—"Locosurrey," Style 5.

a copper tank under the footboard; it is forced by compressed air through the boiler, where it is vaporized, and thence to the burner, where it is ignited. The steam is generated in an upright copper boiler; water is supplied by a direct-action pump connected to one of the crossheads of the engine. This pump works continuously when the vehicle is in motion. The running gear consists of two steel-trussed ball-bearing axles, connected by a double reach; the front wheels connected to their axles by several joints; the rear axle composed of two parts passing through the rear tubing. Fig. 1 illustrates the "Runabout," Stanhope model; Fig. 2 a different make with buggy-top; Fig. 3 a "Locosurrey."

A MAN has a right to leave his employment at any time, so long as he breaks no real engagement, and that right can not be restricted because of alleged wrong motive. A man has a right to do as he pleases—provided he does not interfere with any one else's right to do as he pleases.

## SHARPLES Cream SEPARATORS.

You want to know why they are best. Of course you do. It's easy to say "best," but why? Skim extraordinarily clean and turn easy; but that's no reason, for some others do nearly as well.



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This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for county and State taxation purposes.

This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

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Agent of N. D. Ridout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.

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American Steel & Wire Co., San Francisco, Cal.

## HORTICULTURE.

### The Loganberry in Lake County.

TO THE EDITOR:—In the PACIFIC RURAL PRESS of Oct. 6th is an article entitled "Small Fruits in Santa Barbara County." The writer in his article shows he is a close observer and is no doubt a successful grower of small fruits. I think if he should try the Loganberry it would surprise him, for, in a climate which grows the dewberry so well, the Loganberry undoubtedly would do well. I have grown the dewberry for sixteen years for the market, as well as most of the other small fruits. The Loganberry I have grown three years. Since they have come into bearing I have rooted out most of the dewberries, though I used to think there was nothing could beat them for quantity. My attention was first called to the merits of the Loganberry by an article in the PACIFIC RURAL PRESS written by Ira Adams of Calistoga. I ordered fifty vines as an experiment. They seemed to be the best thing I had ever tried and I set out three-fourths of an acre. This winter I will plant an acre more. The vine is probably too tender for the East. It proves hardy here, though the valley is a frosty one—more hardy than the dewberry or Kittatiny blackberry when in bloom. Last year both were a total loss on account of frost, while I had a fair crop of the Loganberry and raspberry. They are more prolific than the dewberry with me. I have a row of two-year-old vines; it is 150 feet long, trained on wire. This year I had picked from it seventy strawberry baskets of berries at one picking and 300 baskets during the season. Many came to see that row of vines and all declared they never saw anything like it before. The quality is good; for cooking they do not require near so much sugar as the blackberry, and the flavor is fine. For shortcake I know of nothing better.

As to the demand, I sell as high as 300 baskets in a day—retail 12½ cents, wholesale 10 cents a basket—and I never had enough. In fact, I could sell ten times as many. There is no berry in such demand at the summer resorts. Another thing, they keep better than the dewberry, which moulds very soon. I find they do best on rich sandy land, though they do well on other soils. I plant 6 feet apart in the rows. I put a stout redwood post at each end of the row and stretch a strong wire and fasten securely to each post, then lift the vines, putting them over the wire, and tie when necessary. The old vines should be cut out just as soon as the crop is off and the young vines lifted. They make stronger vines and will yield twice as many berries as they will if left lying on the ground until late in the season. The Loganberry may not succeed everywhere, but it has come to

STATE OF OHIO, CITY OF TOLEDO, ss.  
LUCAS COUNTY,

FRANK J. CHEYNEY makes oath that he is the senior partner of the firm of F. J. CHEYNEY & CO., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of CATARRH that cannot be cured by the use of HALL'S CATARRH CURE.

Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1898.

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Hall's Family Pills are the best.

stay. Judge Logan writes me that his famous blackberry is superior. I am waiting for a chance to try it, but really I think the Loganberry is good enough.

R. P. EACHUS.  
Lakeport.

**PROFITS OF ALFALFA AND DAIRYING.**—Modesto Herald: Clarence Stonifer leased his 100-acre alfalfa tract on the West Side for one year for \$1000 cash, the lessees being dairymen. Assemblymen Stewart, the Wilman Bros. and others leased their holdings on corresponding terms. James and Cash Crow leased 200 acres of alfalfa to dairymen, and a cow to each acre, for \$4000 cash, annually. The lessees are to pay the irrigation water rate, \$1.50 per acre per annum, so that the Messrs. Crow net \$10 per acre for the alfalfa and \$10 per head for 200 cows. The rental was paid as soon as the papers were signed.

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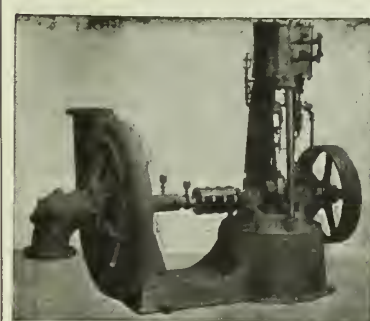
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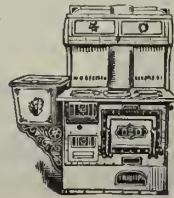
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## Patrons of Husbandry.

### Worthy Master's Address at the State Grange.

From the annual address by WORTHY MASTER G. W. WORTHEN at the recent meeting of the California State Grange.

The Grange in this State needs efficient leadership and the support of the members of the Order. Many of our members are prompt in paying their dues and punctual in attendance. Some get discouraged and fall out by the wayside. Let us not be weary in well-doing, for in due season we shall reap if we faint not. If your Grange has struck a calm on its voyage, don't give up the ship. The winds of prosperity will come your way again, sure, if you are faithful. Longfellow says: "Every man must patiently bide his time. He must wait, not in listless idleness, but in constant, steady, cheerful endeavors, always willing and fulfilling his task, that when occasion comes he may be equal to the occasion."

The Grange has only begun its career of usefulness. All over our land our ranks are being filled. In our own State new Granges have been formed: El Verano, in Sonoma county; Unity, Morgan Hill and Lincoln, in Santa Clara county; Hollister, in San Benito county; Pope Valley, in Napa county.

I have written over 400 communications and have sent out a great amount of literature; have been in the field organizing and have directed work in various places. Several Granges have made large accessions. This will be shown by reports of deputies and Masters. On the whole, the outlook is favorable. Much depends upon the work of this session.

The officers have in mind good working plans. It is for you to suggest, resolve and back up with your talents, time and means the efforts of those who are the most sincere, earnest and devoted to the work.

**GRANGE EXTENSION.**—It will avail but little to organize new Granges unless a lively interest be kept up in those already formed. Our weak Granges must be strengthened, instructed and got into good working order. We should have two good organizers in the field from October to June.

The Worthy Lecturer should supply literature to the Lecturers of the subordinate Granges, furnish them with topics for discussion and direct the work under the head of "Good of the Order."

The Worthy Master should be free to visit the Granges in the State, instruct them in their work, stimulate and direct the officers and keep the eye of the mind open among the members. These three things should be provided for at this session:

1. Supervision of the Granges organized.
2. Organizing new Granges.
3. Attract those outside the gate and imbue them with the spirit of organization and co-operation.

We are thankful for what some of our members have done. I believe they have the plaudit "Well done, good and faithful servant," and the consciousness of having been useful in the world.

It is the faithful worker who gains strength to overcome difficulties. Let us set ourselves to work and labor for the good of our noble Order and the upbuilding of humanity.

**POMONA GRANGES.**—The American people like promptness and efficiency. To secure this, schools of instruction should be held under charge of the Master of the County Grange or deputy. The Pomona should be helpful in every way. There should be the utmost harmony and good feeling between the Pomona and subordinate Granges. This can be possible only when each knows its place and keeps it—its duty and does it.

There should be a Pomona Grange in every county that has three or more working Granges. The Pomona Grange is sometimes called the business Grange. It should also exemplify the work and

see that everything is done decently and in order.

**LECTURE WORK.**—As we have not the funds to pay the traveling expenses of speakers, we suggest that there be a Lecturer's bureau, from which shall be supplied Grange literature, and that there be published a monthly bulletin, which shall be sent to every member of the Order. In it shall be published suggestions for the good of the Order, answers to queries and instructions to the Lecturers and other officers of the subordinate Granges.

**WOMAN'S WORK.**—The woman's work committee is very active and efficient in some of the Eastern States. I believe it could be made so in this State. I call for volunteers who will take charge of this important matter. Woman has her sphere of action in the Grange. It needs only to be defined.

The committee would make suggestions for thought and action. These could find their way to the Lecturer of each Grange by means of a monthly Grange bulletin. It needs the leadership and devotion of perhaps three talented, earnest women. If the women would unite in this work great results would follow.

**EDUCATIONAL.**—In the field of educational work the Grange demands and appreciates the best the State can furnish. It is with gratification that we observe the rapidly increasing numbers of young men and young women who are attending the universities of the State, and especially our State University at Berkeley, where are now enrolled over 2300 students, exclusive of large numbers who are attending the affiliated colleges. The farmers of our State, in ever increasing numbers, are calling upon the agricultural department of the University for the investigation of numerous agricultural problems, as well as for instruction therein.

This year an instructor in dairy husbandry has been added to the department, and a practical dairy school is in process of organization. During the last term over 200 students were pursuing in full, or in part, the agricultural courses, and yet there is demand for graduates of the Agricultural College to fill positions as farm superintendents beyond the graduate supply. Upon every department of the Agricultural College pressing and insistent demands are being made by the agriculturists of the State for bulletins, reports, and that various assistance is called for through correspondence.

**FARMERS' INSTITUTES.**—The growth and increasing importance of the Farmers' Institutes, not alone in number of institutes held, or the larger audiences, but in the active discussion of the work and the lectures, marks an intellectual as well as practical application among our farmers of the value of this extension course in agriculture.

Some eighty-five institutes were held during the last institute year, in which the sum of the attendance at the various sessions numbered about 20,000. The Patrons of Husbandry have everywhere assisted in organizing and supporting this farmers' school and conference. We recognize and appreciate every advance made along practical

and educational lines by our colleges of agriculture, and we earnestly recommend and ask that our next Legislature relieve the pressing financial needs of our University, that we, our sons and our daughters may derive the largest measure of advantage that may flow from the industrial, agricultural and intellectual forces of our State University.

### Tulare Grange Meeting.

To THE EDITOR:—The semi-monthly meeting of Tulare Grange was held in its hall on Saturday, Oct. 6.

The committee on the planting of avenue trees asked for and was given further time to report.

The September subject for consideration in subordinate Granges of the National Grange Quarterly Bulletin was: "What is the Farmer's Duty in the Maintenance of Public Highways, and Should Cities and Villages Contribute to the Support of Highways Leading Thereto?" This subject, having been laid over for further consideration from September meeting, was taken up, discussed and the following resolutions passed:

Resolved, By Tulare Grange No. 198, P. of H., California, in the interest of good roads and equitable taxation, the road law of California should provide for a State apportionment of taxes for road purposes.

Resolved, Our representatives in the Legislature are hereby requested to use their best efforts to secure a State apportionment of taxes for road purposes.

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tionment of taxes for road purposes, the same as the State apportionment for school purposes.

The subject of a supply of water for irrigating purposes being brought up and considered, it was conceded the supply of water from the streams is adequate for irrigating a much larger amount of land than it now does under defective legislation and decisions of the courts; that the laws of California on irrigation should be revised, and should provide for a distribution of the waters of the State on some such principles as are in force in Wyoming; that much water can be obtained by pumping underground waters and much may be secured by storage reservoirs.

On this latter method the following resolutions were passed:

Resolved, The problem of water storage for irrigation purposes can be successfully solved only by the national Government.

Resolved, The Hon. E. A. Hitchcock, Secretary of the Interior, Washington, D. C., is herein respectfully requested, in making up his estimates for the next fiscal year, to recommend an appropriation of

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\$250,000 for irrigation surveys by the United States Geological Survey.

The death of William Saunders, founder of the Order of Patrons of Husbandry, was announced, and the following preamble and resolutions were passed:

WHEREAS, The members of Tulare Grange No. 198, P. of H., California, with much regret have heard of the death at his residence in Washington, D. C., of our esteemed Brother, William Saunders, at the age of 78 years;

Whereas, Brother Saunders was the founder of the Order of Patrons of Husbandry, and for the first three years of its existence was the honored Worthy Master of the National Grange;

Whereas, His life was devoted to the interest of agriculture and to the upbuilding of the agriculturist; he established the greatest and most useful association of farmers—the Order of Patrons of Husbandry—ever organized on the American continent; his memory will always be cherished by us;

Resolved, A mourning page of our records be assigned to his memory.

Resolved, A copy of this preamble and resolutions be sent to Brother John Trimble, Worthy Secretary of the National Grange, with a request that the same be placed in the records of the National Grange as a tribute from Tulare Grange to the memory of so worthy and excellent a Brother as William Saunders.

The subject for consideration at the next meeting will be: "The Formation of Character the Highest Object of the Grange." J. T.

### Black Leg.

It is well known that black leg is particularly troublesome in the fall, and perhaps a word on the subject of black leg vaccination may be of interest to our readers. The merits of the operation are well proven beyond the shadow of a doubt, so that a discussion on that point is not necessary. However, in spite of the fact that cattle raisers recognize the necessity of vaccination, yet many of them put it off from week to week, trusting that luck will see them through, and it is these cattle raisers especially to whom we desire to point out the danger of such a short-sighted policy. By deferring vaccination until the disease breaks out in your herd or in your immediate neighborhood, you sustain an unnecessary loss in the first instance, and court disaster in the second. Such being the case, vaccinate early in the fall and place yourself on the safe side. Now is the time to vaccinate. Do not postpone it, and then feel sore when you lose from black leg. Another and most important point is the vaccine. The whole success of the operation depends on the reliability of the vaccine. Don't be imposed upon by vendors of so-called cheap vaccine, and exercise due caution in regard to experimental vaccines which are distributed gratis to give experience to their makers or for Government inquisitorial or statistical purposes. It is a good plan to use that which has proven successful and reliable by many years of constant use. If you cannot readily obtain it in your neighborhood, ask your druggist to purchase it for you. Stipulate that it bears the name and trade mark "Pasteur." Write to the Pasteur Vaccine Co. of Chicago, who handle the original and genuine article, and obtain some information which will be of special interest to you at this time, particularly regarding the vaccine which is ready for use as sold. The Pasteur Co. has branch offices at St. Paul, Kansas City, Omaha, Ft. Worth and San Francisco.

### El Prado Stock Farm.

Five years ago Mr. Jas. Whitaker of Galt, Sacramento county, California, commenced breeding thoroughbred Herefords. He laid the foundation of his herd by selecting from the Alamo Hereford Stock Farm, owned by John Sparks of Reno, Nevada. Mr. Whitaker has been judicious in enforcing his herd by selecting noted prize winners, the head of his herd being now the noted bull Armour Neptune 13th, bred by P. H. Armour of Kansas City. There were on exhibition at the recent fair held at San Jose fourteen head that attracted much attention and were awarded all premiums offered, as also sweepstakes in herds.

The El Prado Stock Farm has now a herd of 100 head of Herefords. Their breeding has been on the highest lines of excellence from the most noted strains of blood.

### Bird Food.

The food of the bobolink, blackbirds, and grackles is discussed in Bulletin No. 13, of the Division of Biological Survey which was prepared by F. E. L. Beal, B. S., Assistant Biologist of that Division. The birds commonly known as bobolinks, meadowlarks, orioles, blackbirds, grackles, and cowbirds are all comprised in a group known as the family Icteridae, which is represented in the United States by twenty-nine species and subspecies. In this bulletin are discussed the food habits of the bobolinks, the cowbird, the yellow-headed blackbird, the red-winged blackbird, the California red-winged blackbird, the rusty blackbird, Brewer's blackbird, the crow blackbird, and the boat-tailed grackle. These comprise all the important members of the group with the exception of the meadowlarks and orioles. The ravages of the bobolink in the rice fields of the South, and of some of the blackbirds in the grain fields of the Upper Mississippi valley at planting and harvesting time, are matters of common knowledge, but the other food of these and other species is not so well known.

The bulletin is devoted mainly to the food of the various blackbirds during the summer months and is based on a careful examination of the contents of more than 4,800 stomachs, representing nine species and several subspecies of American blackbirds. This examination, while confirming to a certain extent the popular estimate of their grain eating propensities, has shown also that during the season when grain is not accessible these birds destroy immense quantities of seeds of harmful weeds, and that during the whole of the warmer portion of the year, even when grain is easily obtained, they devour a great number of noxious insects. It appears that the vegetable portion of the food usually considerably exceeds the animal and is chiefly hard seeds. The animal portion consists mostly of insects. The damage done by the red wings and some other species has apparently arisen from the excessive number of individuals rather than from the habits of the species, and there is no doubt that in the Mississippi valley the red wings and yellow heads, and farther West, Brewer's blackbirds, are much too abundant for the interests of the grain grower. The bulletin is illustrated with one plate and six text figures.

### LORD & THOMAS WIN GRAND PRIZE.

Lord & Thomas of Chicago and New York, the only advertising agency represented at the Paris Exposition, have been awarded the Grand Prize—highest honor—for their unique and interesting map, which has received most favorable mention from the press and public. This exhibit was shown in the Liberal Arts Department. American advertising methods, as exemplified in the Lord & Thomas display, showing, as it does, another reason for American supremacy in the commercial world, have awakened great interest among merchants of all civilized nations.

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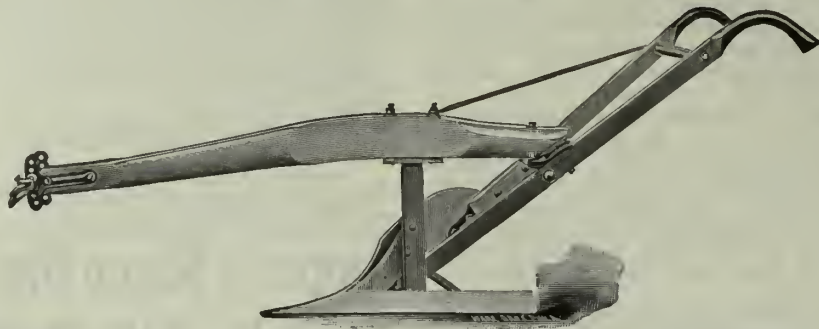
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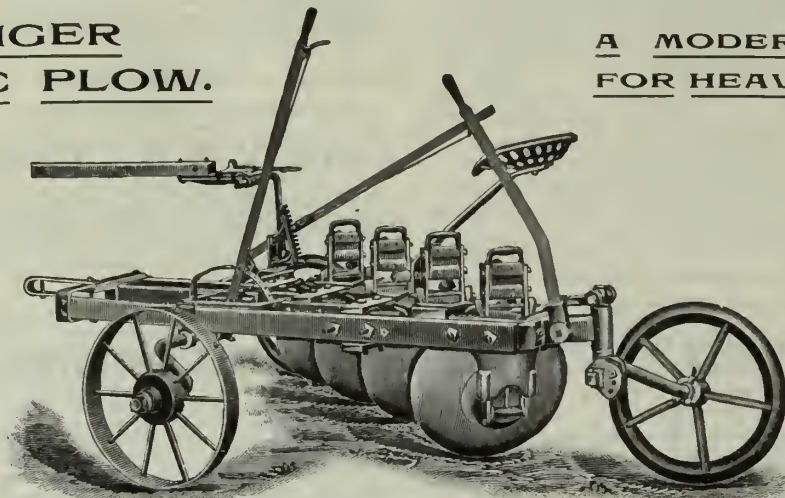
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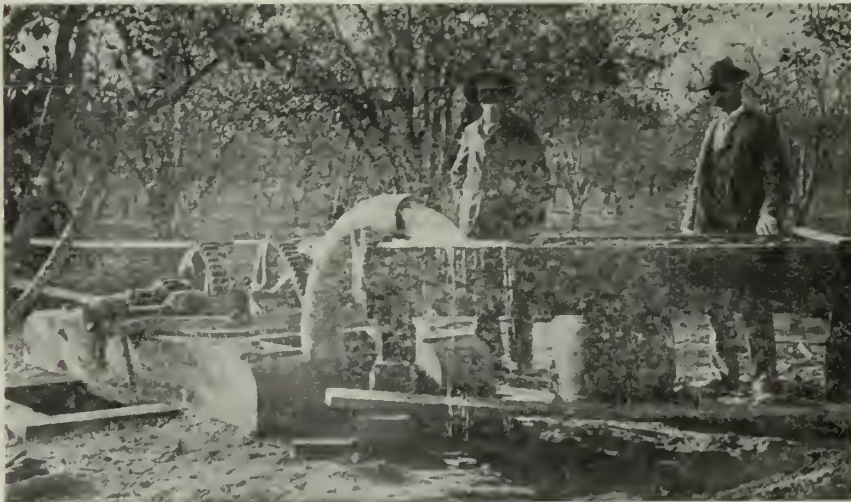
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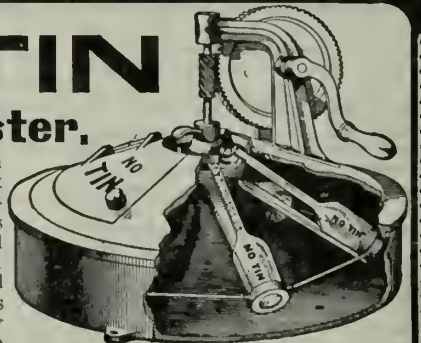
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 17.

SAN FRANCISCO, SATURDAY, OCTOBER 27, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

### A Grape Cluster.

We have on this page a group of pictures pertaining to the grape interest which are worth passing attention. The industries established upon the product of the grape vine are now possessed of exceptional interest in California. There has not been for many years a time when grape products have found such quick sale at such satisfactory prices. The whole attitude of the vineyard in the public eye has changed, and the vineyard has also found a warmer corner in the public heart than it has entered for much more than a decade. This is in part due perhaps to the



California Vine in Fruit.

fact that an excessive acreage has disappeared at the point of the plow or the beak of the phylloxera, but this is only one feature of the situation. More significant facts are that California grape products have constantly grown in favor of late and are becoming each year of more importance in the eye of the American people. California wines are doing

better than ever before in the great cities of the Atlantic side of the country, and are being recognized as fit to displace the imported French product. The unfair way in which the rulers of the Paris Exposition treated California wines by ruling them out of competition through a subterfuge has really advertised their quality more effectively than could otherwise have been done, and will work them marked advantage both in England and in this country. The demand for our wines is shown in the fine prices which have ruled for this year's crop of wine grapes, and there

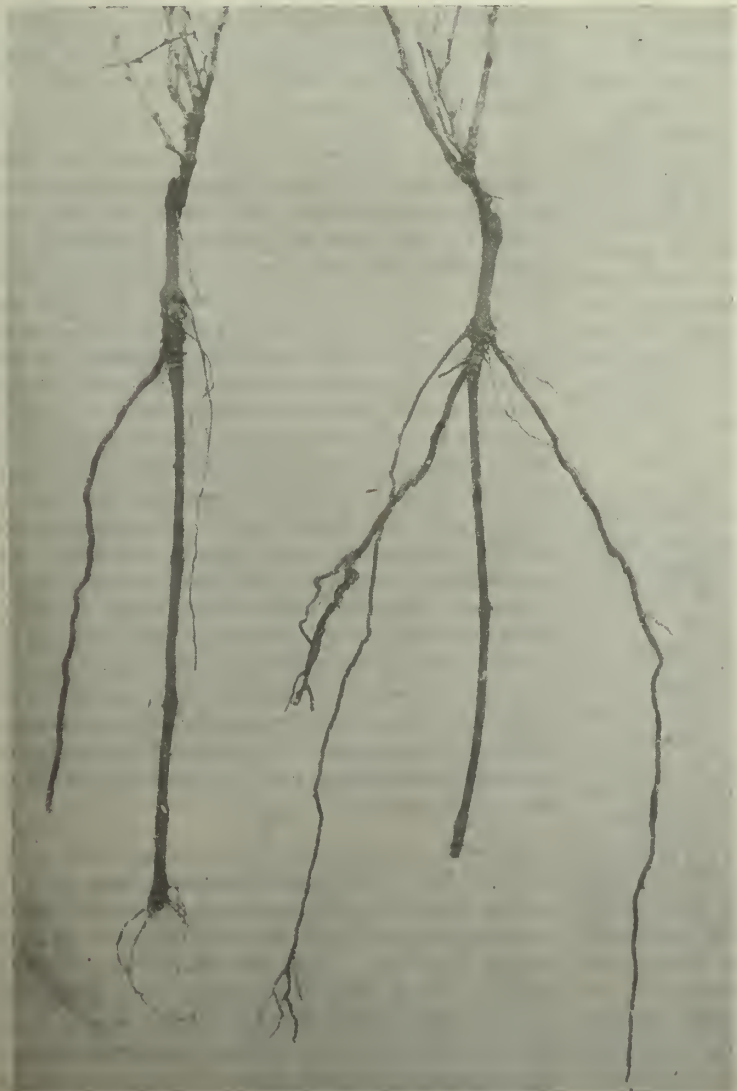


A Typical Vineyard in a California Coast Valley.

seems every reason to expect a continuation of profitable prices even though the planting of new vineyards, if wisely done, should attain considerable acreage. The commercial situation in raisins is also very satisfactory this year, and there is quick sale at the prices fixed by the growers' association, which were accepted at once as within what the traffic would bear. To one who remembers the raisin trade of a few years ago the new order of affairs is as strange as it is comfortable.

It is to be expected that the interest in vineyard planting this coming winter will be greater than for several years past, and it is very important that investments should be intelligently made. We have frequently urged this and we have published many important suggestions concerning methods of proceeding. In places where the phylloxera has not appeared, there should be the utmost precaution against the introduction of it, and the ordinances adopted against outside cuttings, etc., made by some counties are wise.

In the regions where the insect has established itself, the use of the most satisfactory resistants should be pursued. The suggestions in the University



Zinfandel and Tokay Grafted on Resistant Roots.



Work of Wire Worm on Young Vine.



Injury Through Failure to Cut the Graft Band.

publications should be fully studied, and supplements thereto given by various writers in our columns will also be found helpful.

How cutting-grafts grow deep-driving roots is shown in one of the pictures on this page taken from the bulletin on bench-grafting by Messrs. Bioletti and Dal Piaz of the University Experiment Station. They show also some of the evils the vine grower may encounter.



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E. J. WICKSON.....Horticultural Editor.

San Francisco, October 27, 1900.

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## The Week.

Since our last issue there was a wide and thinly spread rain which covered nearly all parts of the State, but was only traceable in some places and was heavy only on the northern coast. In some places there was enough to freshen the courage of the new grass and promote plowing, but generally it was only a surety that the skies are not made of brass. This assurance will do for the present, for people can just as well wait for their plowing until after election, although some, finding politics so dull this year, would be glad to go to plowing just to kill time and pay for horse feed. There promises to be a great rush in agriculture this fall as soon as the ground gets into condition. Prices are better than for some time, and the outlook for demand is even better. Such activity as is now evident in city trade in export products suggests free sowing and planting, and we expect a larger acreage in crop the coming year than ever before if the season proves favorable.

Wheat has taken another drop of 50 cents per ton, but there are withal some rather favorable conditions in sight. It is reported that tramp steamers are headed from the Atlantic to Portland to take wheat, and this has a tendency to weaken the freight market and to create the belief that the top has been reached. Decline in freights would probably go directly to advantage of local wheat prices. There is some wheat going out—two ships have taken cargoes mostly of wheat to Europe, and another has cleared for South America. Barley is steady for good samples; oats are still strong and corn firm. Bran is easier and rolled barley a little firmer. Hay is steady at the last advance. One steamer has taken 17,000 bales for Port Arthur, Asia, and this is believed to be the largest single hay shipment ever made from this port. Beef, mutton and pork are steady; small veal is more plentiful. Butter is weak and lower, and holders seem to be scrambling to get clear of stored butter. Cheese is firm, especially choice new. Fancy fresh eggs have taken a spurt to 42½ cents per dozen, and few are coming. This will have the effect of raising the retail price of Eastern and cold storage eggs and some think that is the object aimed at in lifting fresh so high. Poultry is doing a little better and stocks are lighter; there is better tone and prices especially for chickens and geese. Potatoes are not improved; there are too many common, but really choice sell fairly. Onions are improving; there is

good demand and no excess offering; many being bought to arrive. Beans generally are in good demand and white for the East are higher. Dried fruits are unchanged and little doing except a few raisins. Eastern dealers are waiting for the election bugbear to pass by. What go for new crop oranges have arrived both from north and south; few are selling and not many coming. Lemons are dull and weak. Apples are heavy except for a few fine receipts. Pears are selling fairly. Nut prices hold out well. Wool is really moving a little; choice fall clip being sold to some extent and more inquiry makes the outlook more promising. Hops are firmer and about 1 cent better, and some sales are being made both in city and country.

The subject of jam making for the English markets has often been discussed, but no progress made in California. At the same time, the Australian fruit growers are sending home large quantities of jam. Just why we have not started on this way of using ripe fruit in large quantities we do not quite know. In his address at the State Board of Trade the other day, Mr. W. H. Mills, who has just returned from Paris, ventured the prediction that the canning of pure fruit pulp will soon be a very profitable investment. The pulp can be made from fruit that is not large enough for either preserving or marketing in a fresh condition and now goes to waste. As it would not be necessary to have sugar or alcohol in the pulp, it would be admitted to European countries at a low rate of duty. In Europe it is utilized as a basis for such preparations as jams and jellies, and is admirably adapted to that use. There is a constant demand for it, and California's fruit growers could reap a handsome profit by working off their waste product in meeting the demand. This seems a very reasonable proposition and it should be looked into.

In prune selling the growers outside of the Association seem to be having about all the fun at present. The small discount from fixed rates at which buyers are taking their prunes gives them little higher net returns than they could get from the Association. This state of affairs could not have been avoided, and probably the outside prunes will largely soon pass out of sight. It is reported from San Jose that the course of things is causing no alarm to those who are familiar with the situation. The outside dealers control from 12,000,000 to 15,000,000 pounds in this State, and Oregon and Washington have about 5,000,000 pounds more that go into that side of the balance. No material change is looked for until after election, when, the outside supply being exhausted, President Bond apprehends no difficulty in working off the entire crop at the scale of prices set by the Association. He does not think now that the crop for the State will exceed 120,000,000 pounds. If this estimate is correct, there should be no difficulty about getting good sale at full prices before the season is far advanced. On the whole, the Prune Association is doing very well with its undertaking. To spring at once into effective organization with such a large and scattered interest is a very significant achievement.

We had a good deal to say in a recent issue about the adaptation of the Stockton region to a widely diversified agricultural production, but we were then considering especially the animal side of diversity. There are grand things being done in field crops of the vegetable class as distinguished from grains, and the Mail gives some very interesting figures gathered by J. B. Meloche, buyer for M. P. Stein & Co. of Stockton. On mainland and islands adjacent to the city he locates 18,375 acres of beans, of which an estimated yield is twenty sacks to the acre on an average, or 367,000 sacks all told, equivalent to about 16,000 tons. Of this amount 6400 tons were of Pinks, 5600 of Large Whites, 2400 of Bayos, 800 of Small Whites and 800 of other varieties. Mr. Meloche did not figure out the value of the total yield; but taking \$2.25 as the average price per hundred, 16,000 tons would be worth \$400,000. The disposition of the various kinds of beans is a matter of much interest and not widely known. All the Blackeyes are shipped to Texas, Mexico and Arizona. Stockton is the great shipping point for them; the vicinity produces the best Blackeye beans in the State. The Indians are

fond of the Blackeye variety, which are ground up and used in soup. The white beans are sold principally to the Government; they are the Yankees of the bean tribe. Bayos go mostly to the mountains. They are great favorites with sheep herders, for the more times you boil Bayos the better they are. Pinks are used all over the United States, and large quantities are shipped to Chicago. The small white beans are popular for house use. The Red Kidney and the red beans are used in cooking after the Mexican style.

Potatoes and onions are also large products of the Stockton region, and the value of the potato crop is considerably more than double that of beans. According to Mr. Meloche's estimate this season's potato crop is about 2,220,000 bags, which, at 40 cents a sack on the average the season through, would make the crop worth \$880,000. The acreage in onions this year was the smallest for a long while, being only 500.

Another interesting lot of facts about vegetables comes from southern California and relates to Eastern shipments. One of the leading shipping firms writes from Los Angeles that the acreage of California cauliflower this season is about one-half what it was last season and that the crop is planted to mature much later. First cars of the early variety will be ready about the 10th of November, whereas the first car last season was shipped on the 6th of October. This early variety is unfit for the New York market and must be disposed of in the West. The stock that is wanted in New York will not be ready for shipments before the first or middle of December. The low prices which ruled last season is the cause of the small acreage this year and the entire output under favorable conditions will not exceed 300 carloads, as against fully 600 carloads last season. In celery, too, there is a reduction this year owing to a most unfortunate mixup in the seed, which will reduce the number of cars quite materially. There are fully 2500 acres planted to celery in California, but taking into consideration the poor seed will reduce it to 2000 acres before harvest time, as many fields have not half a stand. The number of carloads will not be over 1200 for the entire season. A large portion of the crop is of the Golden Hart variety and White Plume is not as heavy as it was last season. We were in the celery region of Orange county in September and found the growers very sore over the seed wrongs inflicted upon them and they are warming up the subject very effectively in their local Farmers' Clubs.

The horse resources of this country are being severely taxed. We have frequently alluded to the westward movement to the Orient and the large numbers going out of sight that way. Now it is telegraphed from Wyoming that an agent of the Mexican Government came to Cheyenne about two weeks ago, and since that time has purchased several carloads of saddle horses, which have been shipped to the City of Mexico. The agent will say nothing as to his real purpose in buying so many horses, but it is a significant fact that he purchases only the very best saddle horses and animals that would readily be accepted by the United States Government for cavalry service. The prices paid are in some cases fancy, and the agent seems to have plenty of money. War experts see in this horse purchase the chance of war in Mexico. However that may be we see in it another indication of the fact that fine, shapely and active horses are good property and that we ought to be making more of them in this country about these days. Amid other expansions of good products let those who know how to produce good horses, and have conditions suiting such production, give attention to this matter.

California has another longest thing in the world, and this time it is claimed by Madera county in the lumber flume which now connects Madera with the virgin sugar pine forests 60 miles distant in the snow-capped mountains. Of course any longest thing in the world should have its attainment duly celebrated, and so on Monday and Tuesday of next week a grand barbecue will be given and a varied programme of athletic sports will take place. It is a good thing to celebrate and rejoice and a large industrial achievement is a good occasion for jubilation.



# QUERIES AND REPLIES.

## The Best Figs at Pomona.

TO THE EDITOR:—I wish to put out some fig trees the coming spring, a few for home use, but mainly for drying purposes. I should be much obliged if you would let me know the best kinds to plant.—FRUIT GROWER, Pomona.

The most satisfactory information as to which figs are best in the region around Pomona is to be had by visiting the University sub-station situated between Pomona and Chino and discussing the subject with J. W. Mills, the foreman in charge. There is a large collection of trees to be seen and their comparative growth to consider in connection with what Mr. Mills says of them. For those who cannot avail themselves of such opportunity it may be said that the report of the University Experiment Stations, which is now being printed, will contain a statement that while many varieties of the fig are disappointing, the experience of several years shows that the following are valuable and worth planting in the Pomona region: Angelique, Gros Gris Bifere, Bourgasotte Gris, Negro largo, and a good white fig of medium size imported by the Department of Agriculture a number of years ago and sent to the station under the varied names of Trojano, White Dattato, Black Dattato, and Brogiotto. After four years' observation the following varieties, very useful in the San Joaquin valley, can be discarded, as so subject to "fig sour" that the fruit is usually worthless: Hirtu du Japon, Agen, Du Roi, Ronde Violette Hative, and California Smyrna, the last being a fig of uncertain identity, which should not be confused with the true Smyrna. In choosing figs for drying it should be remembered that the future of that branch of our fruit industry seems to be conditioned upon growing the true Smyrna fig, which now has a new outlook because of the success of caprification at Fresno, to which we have made frequent allusions and shall probably have occasion to discuss in the future.

## What to Plant.

TO THE EDITOR:—I have six acres of Mission olives, one of Manzanillo and one of Nevadillo blanco on a ten-acre colony lot in the Sacramento valley. Where trees have missed I have thought of putting in the Nevadillo blanco. Is that right? On the two acres of my lot not planted I had thought of putting in almonds and English walnuts if the conditions were favorable. The lot is located on a low-lying bench, perhaps 10 feet above the surrounding country, slightly sloping to the northwest. Under separate cover I send a sample of the soil taken from the surface last March. Is this soil suited to the above-named nuts? Also, should olives do well in this soil?—OWNER, New Jersey.

Do not plant any more Nevadillo blanco on any consideration. It is not only subject to disease, but it is under general condemnation for non-bearing. If you plant any more olives at all (which we would not advise), plant the Mission.

The surface sample which you send shows a fairly good soil. What you can do with it depends much upon the subsoil. If it should be underlaid by rock or gravel at too little depth it would probably not give you satisfactory walnuts, as they need considerable depth and moisture retention. Almonds will succeed with much less of this than walnuts and their profitability will be very largely conditioned upon freedom from late winter and spring frosts. There has been great disappointment at various interior points through lack of bearing from this cause. If this is not likely to occur on your place, almonds would perhaps be the best thing you could plant on such soil as your sample shows.

You should have your subsoil prospected by digging to a depth of 4 feet or so. If it holds like the surface to that depth, it ought to be satisfactory for apricots, peaches and almonds, barring the frost injuries aforesaid.

## Reduction of Tree Pests.

TO THE EDITOR:—There is in my neighborhood a lot of prune trees which are said to be dying from attacks of borers, and a neighbor says that we can have them destroyed by application to the proper official, so that they may not be a menace to other trees. If this is true, how should we proceed?—READER, San Mateo county.

There is legislation empowering commissioners appointed by county supervisors to proceed to the abatement of horticultural nuisances. The exact

standing of this legislation you can learn from "Los Angeles County vs. Spencer et al.," Supreme Court of California, Nov. 11, 1899. This decision upholds the constitutionality of the law under which county horticultural commissioners are working, and which gives them power to abate horticultural nuisances and to recover from the owner of the property the cost of the work involved. The elements of doubt in your specific case would be these: Are there commissioners in your county? Does the law provide for proceeding against insect infection other than that which is a menace to fruits? As we understand the law it proceeds wholly on the theory of menace to fruit and fruit plants, and there might be a question as to whether ornamental trees would be included, unless the pests in them could be shown to be a menace to fruit interests.

## Pecans as Roadside Trees.

TO THE EDITOR:—Can you give me any information as to the value of the pecan tree as a roadside tree in southern California? There are several very handsome pecans (of the small nut variety, I believe) in the city of Los Angeles, but they are all near enough to lawns so they can steal a little water if they want to. Do you know if they will do well (as to foliage, I don't care as to fruit) without irrigation under the conditions of a country roadside?—FARMER, San Diego.

We have no idea that the pecan would be at all satisfactory without a fairly generous water supply. We believe it would fail utterly unless it were helped either by cultivation or irrigation or both in a part of the State where the rainfall is light, unless it could strike deeply into an open soil and find subsoil moisture. There are some fine pecans in the Sacramento valley and in some of the coast valleys, but so far as we have observed they are on deep soil which could be expected to be fairly moist below. Under favorable soil conditions they require neither cultivation nor irrigation, but this would not warrant expectation of their success on ordinary upland roadsides without care and, when needed, irrigation.

## Root Grafting the Fig.

TO THE EDITOR:—I wish to know if root grafting is successful with the fig. Have you any treatise on the subject of root grafting, if so please tell me its cost?—GROWER, Fresno.

We never tried root grafting the fig, but we should expect to succeed with it if a good graft was made and wax used to exclude moisture. The fig wood is harder to graft than other wood because of its softness and pithiness—it must be more carefully matched and wrapped. But root grafting would seldom be worth while because the fig roots so readily from cuttings. We know no special treatise on root grafting. It is a simple affair and general fruit books give information enough to start with. It is described and illustrated in "California Fruits."

## Peach Mildew.

TO THE EDITOR:—I send a clipping from a Foster peach tree. It is a young tree, five years old, but diseased in some way. Kindly tell me what is the matter and the remedy.—K. M. C., Santa Clara county.

It is peach mildew. Prune the tree rather severely and spray with lime, salt and sulphur. In most cases this winter treatment will give you clean fruit and tree the following summer. If, however, the disease should appear after growth starts next spring, spray with the Bordeaux mixture.

## Grafting Over Old Trees.

TO THE EDITOR:—I have some twenty-five or thirty Winter Nelis pear trees, ten years old, all in good healthy condition. The soil is good and open and the trees have always had best of care, but they are shy bearers. I therefore consider them unprofitable on account of the small crops and the money they bring in. I have also some fifty or sixty French prunes, about ten years old, all healthy and heavy bearers, but by the time the fruit is ready for drying the days begin to get short and the sun's heat frequently uncertain. It does not pay to haul the fruit in a green state five miles and get 1c per pound. I am unwilling to grub all these trees out if I can work them over into some other kind of more profit. I have Prof. Wickson's book, second edition, but I get no help from his article "Working Over Old Trees," page 119, as he does not say what the various trees can be worked over to.—RANCHER, Placer county.

The Winter Nelis is a shy bearer in some localities and there does not seem to be any help for it. At first it was thought to be due to lack of cross-pollina-

tion from proximity of other varieties but grafting in or interplanting other varieties is not a cure in all cases, for we know of this recourse being followed without effect. As you have good trees in a good place we should top-graft with any pear which in your locality bears well and is worth growing. For commercial purposes, at least, the pear can only be grafted with the pear. Your French prunes will take almonds, if your locality suits them, or any plum which you can sell to advantage for shipping, or you might try the Sugar prune and gain considerably in time by its earlier ripening. In "California Fruits" the discussion of working over old trees gives the process with all the common deciduous fruit trees. In the chapter discussing each fruit you will find the discussion of the stocks on which each will succeed in grafting or budding.

# WEATHER AND CROPS.

## Report of the U. S. Weather Service for Week Ending October 22, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

### SACRAMENTO VALLEY.

Rain during the week has been very beneficial to farmers and orchardists, and has caused but little damage to late crops so far as can be ascertained. In some localities drying prunes were slightly injured, and bean drying was retarded. Oranges are coloring, and at present there are good prospects of a heavy yield of fine fruit. Olives are ripening rapidly, and pickling has commenced. The seeding of summer-fallow is nearly completed in some sections and progressing rapidly in others; a large acreage is being sown. Early sown grain is coming up and looks well. Pasturage has been greatly benefited by the recent rains and is plentiful in nearly all places.

### COAST AND BAY SECTIONS.

Conditions have been favorable for farming operations during the week. Rain has fallen in most places, and has been of great benefit, as it enables farmers to continue the work of plowing and seeding. Pasturage has also been improved, and will probably be abundant through the season. The rainfall in the vicinity of Paso Robles has been very light, and grain sowing will not commence until more rain falls. Nearly all fruit and other crops have been gathered and are under cover. Beans are slightly damaged in some localities. A good crop of corn has been harvested.

### SAN JOAQUIN VALLEY.

Warm, partly cloudy weather has prevailed during the week, with light rain in most places. In the northern portion of the valley the rainfall was of considerable benefit, but in the southern part was too light to start grass or soften the soil. Raisins and fruit were under cover and escaped serious damage. Wine grapes are nearly all gathered. Olives are maturing, and will yield a good crop. Oranges are ripening rapidly, and at Porterville it is expected shipments will commence November 1st. Plowing and seeding are progressing in most sections, and farmers are preparing for a large acreage of grain. Green feed is growing rapidly in some localities, and will soon be abundant. Alfalfa is doing well. Heavy rain would be beneficial in all sections.

### SOUTHERN CALIFORNIA.

The temperature has been nearly normal during the week, and conditions have been generally favorable for fruit drying, which is nearly completed. Light rain has fallen in some sections, but was generally insufficient to start grass or soften the soil; the greatest precipitation reported was 0.22 inch at Los Alamos. The bean crop is mostly gathered and thrashed. Walnut picking has progressed more rapidly than during the preceding week, as conditions have been more favorable. The raisin crop is reported excellent in San Diego county. Oranges are ripening, and will be ready for market earlier than usual.

LOS ANGELES SUMMARY.—Rain the last of the week started plowing and new crop of grass. Bean thrashing unfinished. Oranges in market in some localities. Raisins finished in some sections.

EUREKA SUMMARY.—Abnormally warm weather and heavy rain in the middle of the week greatly benefited grass on the high lands. Soil is in good condition for plowing. Apples are being marketed in large quantities.

## Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Oct. 24, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week. | Total Seasonal Rainfall to Date. | Total Seasonal Rainfall Last Year to Same Date. | Average Seasonal Rainfall to Date. | Minimum Temperature for the Week. | Maximum Temperature for the Week. |
|----------------------|------------------------------|----------------------------------|-------------------------------------------------|------------------------------------|-----------------------------------|-----------------------------------|
| Eureka.....          | 3.08                         | 4.79                             | 5.30                                            | 3.16                               | 42                                | 66                                |
| Red Bluff.....       | .96                          | 3.01                             | 2.62                                            | 1.72                               | 44                                | 78                                |
| Sacramento.....      | .20                          | .88                              | 3.70                                            | 1.93                               | 46                                | 78                                |
| San Francisco.....   | .29                          | 1.43                             | 3.60                                            | 1.32                               | 50                                | 68                                |
| Fresno.....          | .42                          | 1.76                             | .81                                             | .46                                | 46                                | 88                                |
| Independence.....    | .00                          | .82                              | .37                                             | .82                                | 44                                | 78                                |
| San Luis Obispo..... | .58                          | 1.89                             | 3.44                                            | 1.58                               | 48                                | 86                                |
| Los Angeles.....     | .01                          | .11                              | 1.51                                            | .99                                | 54                                | 80                                |
| San Diego.....       | .20                          | .28                              | .42                                             | .42                                | 60                                | 68                                |
| Yuma.....            | .00                          | .02                              | .08                                             | .91                                | 48                                | 96                                |



## THE DAIRY.

### Supplementing Alfalfa as Cow Feed.

By MRS. M. E. SHERMAN of Fresno at the recent Dairy Convention in Sacramento.

Why should it need supplementing? Because it is a heavy protein food. Nature seems to intend to give us a hint of this need of lightening its loaded character when she takes a willing hand in sowing foxtail grass among the alfalfa. As she is a most capricious dame, she soon forgets her benevolent purpose toward the animal world and turns to the preservation of the seeds of the grass by adding those most spiteful little tails that cause all the mischief possible.

**NOT SO GOOD ALONE.**—Green alfalfa is a rich food, even early in the spring. The per cent of butter fat in the milk does not show the drop that green wheat, barley or annual grasses cause. As alfalfa is a perennial, it does not have to hurry along in its growth to be ready for the seed production or become extinct. Alfalfa fields are among the great riches of the State; and this one plant alone, rightly used, would bring wealth, should the varied fruit and viticultural interests fail. Like corn in the Middle West, it is greatly wasted in feeding, and then abused for not being a perfect food. All that often saves the alfalfa-sick animal from death, by slow starvation, is the fact that, in some way unknown to us, Nature can and does convert a small portion of the protein matter into fat. How often have we seen young animals standing knee deep in alfalfa, looking with eyes heavy with longing at the straw in the next field, sending up a cheerful crackling blaze and heavy clouds of smoke as it was burned, while it really had a value for feeding with that green alfalfa far greater than could readily be estimated. We have been asked repeatedly at Farmers' Institutes if we "ever use straw with our alfalfa." We always answer promptly "yes; all we can buy within a reasonable distance."

**WHAT ALFALFA CAN DO FOR GOOD COWS.**—In feeding the herd we drop all grain in April and depend on alfalfa pasture, with hay and straw, until August, when we cut green sorghum for silage. Our test of August 24 and 25, 1900, shows nine cows producing between two and two and three-quarters pounds of butter daily. This does not include the four highest yearly-record cows, as they were all strippers at the time. We used to think these results were due to a residual effect of the heavy grain feeding of the previous winter, but each year heifers that have never been fed grain are coming in and doing as well, so it must be the alfalfa. At present 130 cows are being milked; fifty-two are heifers, sixteen are strippers, the remainder being due to calve by Christmas. The herd test shows 1.37 pounds of butter produced per cow daily.

**SORGHUM.**—While sorghum is a light producer compared to dent corn, it will grow with less water, and cures into a valuable hay when cut early, before it has headed out. It will then grow on again and may be cut two or three times and yet make a light crop of seed.

**INDIAN CORN.**—Indian corn, the natural supplement to alfalfa, fortunately, is easily raised under the same conditions of heat, soil and moisture, as the alfalfa requires, so when the alfalfa field becomes foul with weeds and foxtail, it can be plowed up and planted for two or three years to dent corn. The clean culture and sunning of the soil helps it for either making a finer alfalfa field again or for fruit planting. Corn is rich in starch and oil, producing heat and fat, and, like alfalfa, is not suitable for an exclusive feed.

**SILAGE AND ALFALFA.**—Dairy cattle, like growing animals, are heavy protein consumers, needing the carbohydrates they use in the most available form to avoid waste of energy in the digestive process. When corn is put into the silo and is fed, with cows on alfalfa pasture, we have greatly increased the milk yield, often averaging from thirty to thirty-five pounds per cow.

**WITH ALFALFA, HAY AND GRAIN.**—When used in the winter, we mix wheat bran, 400 pounds, with rolled barley, 600 pounds, feeding ten to twelve pounds daily, with about ten pounds long alfalfa hay. With silage and grain, the long hay seems to be necessary, or the cows will suffer in not being able to regurgitate their food readily. Then will come the quack advice to make an artificial cud of ham or bacon for the reluctant animal to indignantly reject.

Cornmeal, one-half to three-fifths, with enough alfalfa hay, makes a balanced ration, if the cows will eat it. Ours will not, so we make the ration somewhat narrow by adding bran enough to make it palatable to them.

**HINTS ON SILAGE.**—Corn silage and alfalfa hay will also balance perfectly, but the quantity is too great by far for the cow's capacity, so grain must be added to bring it within limit of consumption. Corn going into the silo at the glazing period is at its greatest value, as the nitrogen-free extract has not as yet been transformed into sugar or starch. To feed or silo corn, when grain is in the milk, is to lose a large

part of its feed value. It is much better to be too late than too early in silaging it. This we have found out by having more corn than the silos would hold, and allowing the excess to remain stacked, to be added to the silo later on. It is then run into the silo very wet. While not as good as the first, it makes a perfectly sweet silage and is not as sour as it would have been had it gone in too green. Corn, while it contains some protein, is to be considered as the source of the carbohydrates in feeding rations for cattle, and must be fed accordingly. In feeding corn silage there is a gain in the digestibility of the dry matter consumed.

**COWS MUST BE WELL FED.**—There is a necessity for generous feeding when we remember that a good cow returns her own weight eight or more times in milk during the year, and that the milking qualities depend more upon the type of the cow than upon her breed. The larger cow does her lactation with the greater ease. By the larger is to be understood as largest in digestive capacity, heart and lung strength, not in mere bodily weight, and so most of these cows are of the long, low body type. These animals usually produce as they are fed—heavily if well fed, lightly if underfed. Size does not make as much difference as the productiveness of the cow. One that will produce 500 pounds of butter makes it directly from her food, and, if she receives less, could not make it; and she big or little, it still takes the same amount of food to produce the amount of milk necessary. Therefore, hearty eating and good digestion are essential qualities.

While the narrow ration is best for milk production, there is a limit to its use. First, the cows refuse to eat over a certain amount; second, when pushed past toleration, it will bring on indigestion and faulty nutrition. Protein indigestion is often death by bloating in the field, or the slower form of the chronic type of bloating, that makes a cow useless, for it is only the cow that can be heavily fed over a long period and remain healthy that is the continuous producer. A cow is not like the horse that is worked hard and then turned out to rest when worn out. No; a cow expecting such treatment would quickly walk away in the butcher's drove.

**HOW TO GET GOOD COWS.**—The increasing of either the milk flow or butter fat in a strain of dairy cattle is done by constantly selecting the best animals and the feeding of a narrow ration. The narrow ration feeding has reached its danger point when the calves dropped are feeble and the bony frame of the mature cow becomes too prominent and rough. Then it is time to widen the ration. When we find our cows dropping calves of less than eighty pounds weight, and without carrying any body fat to take them over the skimmed milk period, we know the cows are being pushed on a too narrow ration. These calves must be fed new milk until there is a little fat stored on their frames, or they will make runts. We then add extra corn to all the ration of the cow that will calve within the next three months—sufficient to see a visible increase of the fat on her frame. Indeed, it pays well to feed them, as the cow comes in strong with a heavy flow of milk, and several weeks are not lost in bringing her up to her best on full feed.

Increasing the milk flow increases the demand on the nervous energy. This must not be pushed to where the cow is sent off her balance, but carefully built into a well-balanced nervous system, or we have a flighty, fidgety animal that requires constant doses of salts to relieve the nervous dyspeptic conditions with which she is afflicted.

**WHAT IS A GOOD COW?**—The best cows are those that are not extreme either in the per cent of butter fat or in the milk flow. A cow milking fifty to sixty pounds of 4% to 5% butter fat is more apt to be a healthy, useful animal that will produce by the year than the cow that gives eighty pounds of milk or 7% fat. Neither of these machines is apt to be too delicate and go off the balance easily. Salt increases the amount of protein a cow can readily digest. When cows running in pasture are fed grain, it is well to put them in smaller enclosures, as, in hunting around for green nips of grass, they are apt to exercise most of the energy from the feed in walking instead of milk producing.

**ALFALFA AND BRAN.**—With alfalfa, either green or as hay, for part of the ration, we do not begin to receive the results from feeding bran, which is claimed for it in the East. Indeed, were it not that the cows will eat their food cleaner with it, and that it seems to have a slight laxative effect which is desirable, we would hardly buy it. Of course, the cow must have her twenty-five to thirty pounds of dry matter daily. We try to keep the ration about 1.6 all the time, using 12.5 carbohydrate to 2.5 protein, or four-fifths of the digestible portion concentrated grains and six-tenths in the roughage. The meal is all finely ground and made moist enough for the cows to be able to gather up a mouthful at a time without choking.

**OTHER FEEDS.**—In order to further concentrate the feed, we often use the cocoanut cake. While it only contains half the protein of cottonseed meal, it is cheaper on this coast and does not make butter nearly so hard and white—both qualities which are not liked by our customers. Cocoanut cake is also to be obtained in a fresher state and not rancid. It feeds well with corn silage.

**COMMENDED RATINGS.**—When cows are on dry food

entirely, the following will keep up a good yield of milk: Thirty-five pounds alfalfa hay, four pounds rolled barley, two pounds cornmeal and enough bran to make it palatable. Another favorite ration used to be two pounds rolled wheat and five pounds corn, ground together, alfalfa hay unlimited. This ration made fine butter, but wheat is now too high to make it practical.

**CORN YIELDS.**—When we compare corn with alfalfa as a crop, we find our alfalfa fields that were cut for hay have produced yearly at the rate of 11.25 tons per acre. If you multiply this by 5, it gives 56.25 tons green, or less, if you think it does not dry out or drop leaves that much. The dent corn, grown during the same period, has produced fourteen tons per acre, green, so alfalfa silage is cheaper than corn; and as this covers two dry years, as well as two good ones, it is probably a fair average.

**ALFALFA SILAGE.**—There is quite an item of expense in the sowing, plowing and hoeing of a corn crop yearly as against the fixed stand of alfalfa, so we are now working on the filling of our silos with alfalfa instead of corn and buying ground corn to balance up with. There is also a slight difference in favor of the alfalfa silage as a milk producer, when fed with the cornmeal. The following is the ration: Six hundred pounds ground corn, 200 pounds bran, using ten to twelve pounds per cow daily, with some of the corn stalks or wheat hay for roughage, together with all the alfalfa silage they will eat. With this we have had the best results in the way of profits of any we have tried. By putting the alfalfa into the silo, it is secured in the best condition. When coming into bloom, .71 is digestible; when in full bloom, .65; when going out of bloom, .59. When feeding alfalfa silage, the milk requires extra care by running a heavy cream through the separator. From well-warmed milk, the taste can be removed; but with our stalls and barns, if we have tainted milk, we know some one has been careless. We frequently have occasion to review our seven years' records of our monthly cow tests, and find them very interesting and instructive in teaching us that it is not what we think, but what the cow does, which makes the dairy profitable.

Fresno.

### Qualifications of Creamery Managers.

By E. H. HAGEMAN, Pescadero, at the Seventh Annual Convention of the California Dairy Association.

The qualifications of a creamery manager must be multifarious if taken in detail. They will encompass the moral code as well as a proper knowledge of the principles and science of butter making. In the economy of time only such elements as are essential to the proper discharge of duty will be considered. Our creameries have come to stay and we must have managers to operate them successfully, not only temporarily, but permanently, of course. The loss in a creamery by a careless and wasteful management can hardly be perceived, and I know of no other two requirements combined that are as essential to the successful operation of a creamery as economy and cleanliness, and the manager that will practice the latter will almost invariably be found capable in all the other requisites.

I believe every manager should be a graduate of some dairy school. I do not want to be understood that there are not some good managers without such a course, but there is just where is taught the science of butter making and the practice of economy and cleanliness; as a general rule, a dairy school education would raise the standard very much higher.

**CARE OF MACHINERY.**—In taking charge of a creamery the first requirement is economy and care of creamery machinery—a very important part, and without which creameries could not exist. The boilers must be cleaned mechanically and the mud and scale scraped out at the hand-hole. This blowing out the boiler, as we hear about, does not do a particle of good and is ineffective. The engine will give very little trouble, if properly oiled and wear taken up when necessary, which is also true of separators and other machinery.

As a rule, creameries are in remote districts and far away from repair shops or the services of a machinist. It is, therefore, necessary for the manager to make repairs quickly should occasion require, and if a separator gets out of balance he should be able to balance it, thereby causing the least possible delay to both creamery and patrons, and unnecessary expenditure of money. It is therefore convenient, perhaps, for a creamery manager to be jack-of-all-trades part of the time.

**ECONOMY.**—A manager who practices economy will watch his separators closely to see that they skim clean and will not lose any more fat in the butter-milk than he can possibly help. One-tenth of one per cent more than necessary lost in skim and butter-milk in a factory receiving on an average, say, 5000 pounds, will show astonishing results.

**CLEANLINESS.**—The creamery should be kept neat and clean, inside and outside; cleanliness is a cardinal virtue, and a dirty, filthy-smelling creamery and clogged-up milk pipes, or tobacco juice on the floor, etc., are silent witnesses of his imperfections.

**OTHER POINTS.**—The manager must watch every



avenue of loss to the creamery and should acquaint himself with every business relative to the creamery, such as the dairy markets, buying of supplies, and so on. He should be a good judge of dairy products, to know what grade of butter he is turning out and, consequently, the price it ought to command.

He should read the best dairy papers and not think because he has learned his trade he is through, but must remember that the evolution of things never ceases and that new and better ways keep constantly coming in to be applied to his work, and it is his duty to employ opportunity and to try experiments by which the methods of work can be improved.

The creamery manager must be polite, punctual and reliable. Politeness facilitates and makes pleasant all branches of the business, and like small change is in constant demand. Punctuality is one of the many requisites of a creamery manager: it is the result of training and conscience, and the want of it shows a disregard for the time and property of others. Reliability is demanded and expected. He must have the confidence of both officers and directors and all of his patrons, if success is expected.

The creamery manager who will pay respectful attention to these principles will be quite certain of reward for his fidelity.

## THE IRRIGATOR.

### Progress of Irrigation Work in the West.

The first progress report on irrigation investigations made by the Office of Experiment Stations, under the supervision of Elwood Mead, expert in charge, is in press and will be issued soon as Bulletin No. 86 of the Office of Experiment Stations, U. S. Department of Agriculture. It deals with the methods in use in the arid States in the distribution and use of water in irrigation, and gives a large number of measurements made to determine the duty of water; the losses from seepage and evaporation in canals; and describes the methods by which the water supply may be more effectively and economically applied to crops. It contains papers discussing the results of the year's investigations, by Elwood Mead, expert in charge; Clarence T. Johnson, assistant; and reports and discussions by special agents Thomas Berry, Colorado; W. M. Reed, New Mexico; W. H. Code, Arizona; W. Irving, California; R. C. Gemmell and George L. Swendsen, Utah; D. W. Ross, Idaho; Samuel Fortier, Montana; and O. V. P. Stout, Nebraska. It is illustrated by views, diagrams and maps showing the location and character of the investigations made.

**A NEW UNDERTAKING.**—The investigations described deal with problems which sorely perplex the irrigators and canal builders of the arid West. Their comprehensive study is a new feature of National aid to irrigation development in this country. Heretofore the leading object of such aid has been to promote the construction of new canals, to show how much land there was above existing ditches which could be reclaimed, and the benefits which would come from such reclamation. It is believed that this investigation will tend to secure these ends, but its primary purpose is to promote the welfare of the people living under the ditches already built, to render the farms now irrigated more profitable, to lessen the controversies over the distribution of water, and secure its more systematic and economical use.

It is the opinion of those best informed that a better understanding of the existing situation must be had before we can plan wisely for future development. Controversies over the use of streams should be ended before an attempt is made to augment greatly such use. The claims to water, for existing and prospective ditches on many streams, amount in the aggregate to many times the supply. The character and extent of the rights now vested must determine what is to be done in the future.

Every transaction which has had to do with the disposal of streams has been marked by a lavish prodigality. Ditches diverted more water than was used; their owners claimed more than they could divert; while decrees gave appropriators titles to more water than ditches could carry and many times what the highest flood could supply. Little was known of the quantity of water needed to irrigate an acre of land, and in the absence of such information the ignorance and greed of the speculative appropriator had its opportunity.

The contracts which control the distribution of water from canals were framed by people to whom the whole subject of irrigation was strange and new. It often happens, therefore, that they do not promote the best interests of canal companies or meet the necessities of users. The laws which govern appropriations of water from streams have in most cases no relation to the actual practice of irrigators and, therefore, fail to secure either the systematic distribution or best use of the available supply.

Believing that a more general understanding of the causes which increase or diminish the duty of water is one of the most urgent needs of irrigated agriculture, the determination of this duty was made a leading subject of these investigations.

**Loss of Water.**—The report gives three tables

showing the measurements of water flowing into large canals at their headgates, another the water taken in by small canals and laterals, and the third the measurements of the water actually reaching the fields. The difference in results of the measurements at the three places shows the approximate loss of water in transit in canals. The results given are expressed in the depth to which the water measured would cover the land irrigated, provided it all reached the land. The table below gives the averages of the three classes of measurements:

|                                                        | Depth,<br>feet |
|--------------------------------------------------------|----------------|
| Measured at the heads of large canals.....             | 5.63           |
| Measured at the heads of small canals and laterals.... | 2.40           |
| Measured at the margins of fields where used.....      | 1.29           |

The causes assigned for these losses are improper construction, the nature of the soil through which the canals pass, and the practice of placing checks in canals to throw water on land too high to be irrigated without their use. The report of the work on the Gage canal in California shows that practically all of these losses can be prevented where the value of the water will justify the necessary expense. This saving would enable existing canals to irrigate double the area now reclaimed.

The most serious losses from evaporation do not occur in the main canals, but from the fields where water is distributed. During the midsummer season the continuous sunshine heats the surface of the ground to a very high temperature. A test made last summer showed the surface soil in southern California to have a temperature of 120° F. When a thin layer of water is spread over land thus heated, as it is frequently done where flooding is practiced, the loss from evaporation must be excessive. Mr. Reed discusses this in his report showing instances where it has become so great as to entirely absorb the volume supplied. Irrigators know by practice how much faster an irrigation head of water travels over fields at night and in the early morning than during the afternoon. This is due to the difference in the rate of evaporation. In order to lessen this loss it is important that fields be irrigated as quickly as possible. To do this each irrigator should be supplied with all the water he can distribute. Where only a small stream is used, progress is slow, the soil next the laterals is supersaturated; it is hard work to reach the high spots while the low ones are over-irrigated by the delay this causes.

**WATER DISTRIBUTION.**—Contracts which provide for the delivery of a uniform constant flow are, as a rule, wasteful of water, and are not in the interest of either ditch companies or the public. Contracts which charge for the acres irrigated without regard to the volume used on these acres, are a temptation to extravagance on the part of the irrigator. On the other hand, contracts proving payment proportioned to the quantity delivered and for delivery in amounts which can be most efficiently distributed can not fail to lead to economy in the use of water and consequently to a high duty. Under such a system the irrigator is benefited by his saving and pays for his waste. Such contracts can be employed only in connection with a system of rotation in delivery to irrigators. This rotation benefits the canal company as well as the irrigator, because it lessens the loss from evaporation and seepage. If a canal is large enough to supply 100 farms it will still supply them whether they are irrigated every day or one-half given twice the usual supply every other day. On large canals the economy of such rotation is very great. It would permit of dividing canals in sections and supplying the lands under one section at a time. A canal 60 miles long could be divided into three sections of 20 miles each and all the loss from seepage and evaporation on the lower 40 miles saved while the irrigators of the upper section were being supplied. In the same way, by keeping the full supply in the canal, water could be rushed through to users under the lower sections with less loss than where the flow is depleted by laterals along the route. The greatest saving in rotation, however, would be made in the laterals. Where water is permitted to dribble slowly through continuously the waste is enormous. By devising a system for grouping the laterals and inducing the irrigators therefrom to take water by turns, the engineer can do as much toward raising the duty obtained as the actual cultivator.

Owing to the requirements of the law limiting the publication of bulletins containing over 100 pages, only 1000 copies will be printed, unless the demand is such that Congress sees fit to provide for a larger edition. There can be no distribution, therefore, to miscellaneous applicants. A limited number will be for sale by the Superintendent of Documents, Union Building, Washington, D. C.

### Movement of Ground Water.

The amount of water stored in saturated soil—that is, below the ground water surface—is, in round numbers, two-fifths of the whole bulk. Usually three-quarters as much is to be found even in soil above the plane of saturation, except during dry times in a surface layer 1 to 5 feet thick. Saturated sandstone may contain as much as 38% in bulk of water, equivalent to immense and deep lakes in widespread and level-lying areas of sandstone. Even compact mar-

bles and granites contain an appreciable percentage of water. It is probable that water penetrates the earth's crust in some degree to a depth of more than 10,000 feet.

Consolidated and deep-lying rocks have, in growing compact, lost much water. Fine silt deposited in water contains more than half its bulk of water, but, on compression by overlying sediment, part of the water is driven out, either upward, downward or sidewise. Evidently, vast quantities of water must so have been expelled from the enormous masses of rock that now underlie mountain regions, much of the rocks at present having less than 1% of pore space. Such water-bearing sediments, when carried down several thousand feet, must in higher temperature expand and drive out water in some direction, the water flowing much the more readily from its lessened viscosity at a higher temperature. The gradual deposition of mineral matter from the stationary film of water around the grains of a sandstone, and the consequent absorption of other mineral matter by the film from neighboring circulating water, and again the deposition of this absorbed material, until the rock becomes much more compact and less porous, must occasion the expulsion of great quantities of water in the case of vast bodies of rock. The consolidation of 50,000 square miles of sediment 1000 feet deep, with an original pore space of 33% reduced to 3%, must require the expulsion of a sheet of water 50,000 square miles in area and 300 feet deep, and its replacement by solid rock material—enough material to take the Mississippi river 60,000 years to supply, even with 150,000,000 tons carried in solution annually to the sea. Such subterranean movements of water are extremely gradual, lasting through long periods of time.

## HORTICULTURE.

### Small Fruits.

By I. J. GRAY of San Marcos, at the Farmers' Institute at Escondido.

I have a ten acre tract, three acres of which is level land, sloping gradually toward the creek bed, composed of brown loam with hard red adobe subsoil. There are about two acres on both sides of the creek, including the creek bed of level land, black loam with blue clay subsoil impregnated with alkali. This land is fertile and always damp. The rest of my possessions is side hill with northerly slope, composed of disintegrated granite. Some of it, however, is not disintegrated, as the rocks are still there.

When I began improving the ranch, nine years ago, I planted fifteen varieties of small fruits, and nearly every kind of vegetable. Among the small fruits planted were three varieties of cherries, two of currants, four of strawberries, two of guavas, three of blackberries, besides black and red raspberries, gooseberries, etc., nearly all of which proved a failure financially. Only one variety of blackberry has proved successful for the market. All the other small fruits I have discarded after experimenting until I found I could not raise them profitably, and I could not afford to grow them for home use. The Early Crandall blackberry is the one I grow and find productive and profitable, of course more so some years than others. This variety of blackberry, with the Loganberry and Arizona strawberry, are perhaps the only small fruits which have been successfully grown for market in San Marcos or Escondido valley.

**WHAT NOT TO PLANT.**—Anyone intending to raise small fruits in this section for market I would advise not to plant red raspberries, black caps, currants, cherries or gooseberries at all, and not even strawberries unless he has rich, deep soil especially adapted, and plenty of water for irrigation. If there is any one thing which will make a strawberry plant grow better than irrigation I don't know what it is, unless it is more water. I have a small patch of Early Crandall blackberries on the low land near the creek which will each year produce one crop of fruit without irrigation. This little patch of about one-eighth of an acre brings me about as much cash as all else I grow on the ranch.

**GROWING BLACKBERRIES.**—In planting out a blackberry patch, do not make the mistake I did, by planting too closely together. They should at least be 8x10 feet apart and perhaps 8x12 feet would be better. I know the little plants about the size of a lead pencil when planted out look lonesome 8 or 10 feet apart, but wait until they grow up and stool and branch out so that the bushes are 8 to 12 feet in circumference, as are some of mine, and they will seem close enough. Of course you are aware you do not get any fruit of consequence the first year, and the young canes will be slender and trailing. They seem to need a trellis, or some support to keep them off the ground, to make it convenient to gather the fruit the second year, when they should bear heavily. The second year's growth, if properly pruned throughout the fruiting season, needs no support. The ends of the new canes should be snipped off at intervals during the entire growing season. The new canes should be cut back when 3 or 4 feet high, and the



laterals when a foot long, making it necessary to go through the patch with your pruning shears at least once a week. Some cool day in the fall or early winter go into the patch and cut out the old canes that produced the first crop of fruit. These you will find dead and should be all removed. The new canes should also be pruned back so you can cultivate, but not too severely, for you cannot get berries without bushes.

For cutting out the old canes I have made a little hook, which answers the purpose quite well and costs scarcely anything. I took a section knife from an old mowing machine sickle and cut a part of one side so as to have it hook-shaped; this I ground to a sharp edge and firmly riveted to a hardwood stick 3 or 4 feet long. I used a broken hoe handle for this purpose. An improvement might be made by having a stout blunt hook fastened firmly to the other end of the handle, which might be used to haul the old canes out after they are cut.

**IRRIGATION.**—In the spring, when in bud, if the ground is not wet from late rains, give the vines a thorough irrigation, and when the ground is dry enough to work cultivate thoroughly, but do not plow too deeply, not over 4 or 5 inches, as you will cut off the roots which cause suckers. Then wait until the fruit is set and repeat, cutting out all weeds and suckers. Do not cultivate when in full bloom, as you are sure to disturb the blossoms and blast the fruit. I would not advise much irrigation or cultivation during the picking season. A better plan is to mulch with straw or chaff after the second cultivation, which will keep the ground from drying out, and clean.

**PICKING.**—There is another thing which should be looked after. Care should be taken in the selection of pickers. Anybody over five years old can pick berries, but there are many persons who cannot, or do not, pick them properly. No one should be employed who does not pick the ripe berries clean, or who disturbs or picks the green ones. They should always be clean in the box, without leaves or stems, and care should be taken that they are not bruised, and the boxes should always be filled full. These rules apply to the picking of all berries and other small fruits. A good way is to have light, shallow flats or boxes with a bail so they can be carried on the arm, and just large enough to hold four or five berry boxes—four is the better number for blackberries.

#### Hints About Orange Growing in Tehama County.

From an address by MORTON PENFIELD, at the Maywood Colony Celebration.

In starting an orange orchard, about the first thing to be considered is the preparation of the ground. This embraces perfect grading, thorough and deep cross-plowing, and subsoiling, if possible.

By grading we mean the "knocking down of all knolls and hummocks, and filling in all depressions, so that water will run freely over the whole surface of the ground. This is done by first plowing the knolls and then dragging the soil into the low places with scrapers, after which the ground is further smoothed by a frame scraper, leaving the surface of a uniform grade.

After the grading is finished, the ground should be well cross-plowed and thoroughly harrowed. By using a subsoil plow a much greater depth of stirred soil is attained, which creates a larger reservoir for the holding of moisture, further simplifies the digging of holes and cultivation in general. This first step in an important one, and though it means a great deal of work, it will pay. There is trouble in store for the man who plants an orange orchard without having his ground in perfect shape for irrigating.

The tree holes should be dug about 15 inches deep, and the same in diameter, a little outward from the perpendicular, as this will help the roots to strike down instead of running too near the surface. In case a subsoil plow has been used, the digging of the holes is much simplified, as the entire field is literally a hole 20 inches deep.

Citrus trees require much care in planting. An orange tree must not be set too deep. This has been a very common mistake. Set the tree high enough so that when the first water is applied the tree will settle to a point where the crown roots will be even or a little above the general surface of the ground. Planting the tree in this manner will prevent the water from settling at its base. It is this settling of water at the base of the tree that is almost certain to bring on gum disease, so fatal to all citrus trees.

With his ground in first-class condition and his trees properly set, the owner of a young orchard watches its growth with interest and satisfaction. The tender green shoots become branches, and soon harden, and grow darker. Then, while top rests, the roots push their way through the loose soil, and so this alternating growth goes on unceasingly through the year.

In irrigating the orange, or any other tree, there are a number of ways of applying water. For the first season, what is known as the basin system is probably the best method. An irrigation basin is simply a circular ridge of earth thrown up around the tree, about 3 or 4 feet in diameter for young

trees. In the first two waterings the water should cover the whole surface of the basin, up to and touching the tree, as this will serve to further settle the tree, and drive out any air remaining in the hole surrounding the roots. After the second irrigation, in making the basin, allow a small mound of earth to remain around the base of the tree, to keep the water from touching it. The second season it is better to run the water in furrows on each side of the tree row, and at each successive season to apply it at a greater distance from the tree, by increasing the number of furrows, than the previous season. This encourages the roots to go after the moisture, which develops a strong, healthy root system.

In applying water to trees in general, and the orange and lemon in particular, do not water them a little every day, but give them a thorough soaking and then allow the sun a chance. After this the cultivating and pulverizing of the soil is almost as necessary and will do as much good as the water itself.

The question of how often to irrigate depends upon conditions. Never allow the soil to become dry and hard. If the ground has been prepared as described, once in three weeks will be often enough for young trees the first season. For the second and succeeding seasons, irrigation is required about every thirty days.

With proper irrigation and deep cultivation oranges can be made to produce a fair return in three or four years. Before the owner realizes it his orchard has come into bearing. After which, with proper care, the crop will increase for several years, until the tree has attained its full growth. And now the owner will hesitate a long time before he will part with his dividend producing investment.

## FRUIT MARKETING.

### Handling Walnuts.

A pretty scene of the wealth of Orange county, says the Blade of recent date, is that at the big packing house of the Santa Ana Valley Walnut Growers' Association, down by the railroad tracks, where a steady stream of the rich and luscious nuts is pouring through the grading and cleaning machinery and finally into the sacks in which they are shipped.

They look nice enough as they come from the orchard to satisfy the average critic—large, bright and clean—but the trade expert has finer distinctions in his mind and does not let them pass until they are sorted as to size, cleaned of possible discolorations and separated from any bruised or imperfect ones.

**RECEIVING THE NUTS.**—When first brought in the nuts belong to the individual growers until graded, after which they become association property. For instance, a man brings in a load. They are found to weigh a ton, and he is credited with a ton without regard to quality or value. But as soon as they have been graded and assigned to their several classes, the credit is changed to its due proportion of the several grades, and thus his credit has both quantity and value, for to each of these grades a price has been previously assigned by the association. So up to the time the nuts are graded they are kept in separate piles and remain the individual property of the grower who brought them. But after grading they are association property, are not kept separate, and the producer has a money credit for them, the same as a depositor in a bank.

The nuts, then, being brought to the packing house, are first weighed, in bulk, and piled with the producer's name at each pile.

**GRADING AND BLEACHING.**—The first step in their preparation is the grading, which is done by pouring them into the upper end of a long cylinder of wire netting, which, slowly revolving, drops the smaller ones through meshes and carries the proper size down to the cleaner. This passes them through a solution which removes any discoloration, and at the lower end of this they come out bright and clean. At this exit a sorter watches the stream, and with trained eye quickly discovers defective nuts, which a trained hand as quickly grabs and picks out, so that they leave here not only graded and cleaned, but free from broken, blemished or otherwise defective nuts.

They come out of the cleaner wet from the solution through which they have passed, and so have to be dried, for which purpose they are next passed through a long drier, whence presently they emerge all right and ready for sacking. They are dropped by the carrier into sacks without handling, and indeed have no handling through the whole process of grading, cleaning and drying, except the culling of the blemished ones—all being done automatically.

At the sacking place sits a sewer with his twine and needle, and each sack is neatly, quickly and strongly sewed up until it looks much like a bag of Old Government Java coffee.

Each bag has the brand of the association, which thus guarantees the quality, and that brand is much like the Government's stamp upon a coin, making it pass current, for the association's mark on a bag of walnuts is recognized everywhere as proof of the

goodness of the contents, and brings it the highest price the market allows.

The association last year shipped about forty cars of ten tons each, worth \$60,118.98. This year the quantity will be somewhat less, on account of the shortness of the crop.

The packing house began work Monday morning, 15th inst., and will continue to about December 1, having to finish shipping in time for the holiday trade. Its capacity is fifteen tons a day.

The association is one of seven in southern California and has about 150 members, including the leading walnut growers of the valley, and the advantages of membership are numerous.

### Southern California Citrus Fruit Exchange.

In the season of 1899-1900 ending Aug. 31, according to the Ontario Record, the Exchange marketed 2,164,793½ boxes of citrus fruits. The delivered price of this fruit was \$5,809,694.62. The cost of marketing this fruit (excepting auction charges where sold at auction) was less than 1½% of gross sales. The total losses from bad accounts, etc., was less than 1% of 1% of gross sales. The sales for the past four years aggregate \$13,000,000, on which there have been losses of less than 1% of 1%.

The Southern California Fruit Exchange handles the largest amount of fruit in the world marketed under one management, at the lowest cost of selling, with the smallest percentage of losses, and gets the highest average prices. The large volume of business handled enables it to employ the best salaried agents, receive the most complete market reports, give the fruit the greatest distribution, act as the greatest influence in sustaining steady prices, and make the business one of profit and satisfaction to both the dealer and the producer. It is a co-operative organization of growers under the management of the growers, and run by themselves for their own benefit at actual cost.

### Kentucky and Canada Blue Grass Seed.

TO THE EDITOR:—Kentucky blue grass is the most popular lawn grass, and deservedly so. All seedmen know how closely the seed of Kentucky blue grass (*Poa pratensis*) and Canada blue grass (*Poa compressa*) resemble one another, although it would be a great mistake to sow your lawn with the latter.

These seeds are tiny— $\frac{1}{16}$  of an inch long and one-fourth as wide at the widest part. Examine the seed ever so carefully, put them under the lense of a compound microscope and study them well, and I think you will not find distinguishing marks that are constant and reliable.

It takes an expert to handle them. The seed must be properly softened by boiling or otherwise. With botanists' dissecting needles remove the bract and the palea. Under the microscope infinitesimal horny teeth are revealed, edging the palea, or semi-transparent delicate envelope of the seed. In the case of the Canada blue grass seed, near the tip of the palea, these teeth are close to one another, and regular and uniform, like the teeth of a fine saw. In Kentucky blue grass seed the teeth are longer pointed, are more irregular in shape and at uneven distance from one another.

Other distinctions have been described by writers, but I have not found them to be constant, or have found the difference to be so slight that one could not be sure that they existed. ALICE F. CRANE.

Berkeley, Oct. 24.

ALL poisons are traced to the circulation, and it is observed that death is the result; but there is no satisfactory explanation of the fatal effects or how the poison operates. The blood seems to be so changed by the poison as to render it unfit to perform its proper functions; but neither chemistry nor physiology throws any light upon the changes produced by any poison in the blood or the vital organs. It has been clearly shown that no substance acts as a poison until it has been absorbed and passed through the arterial capillary system. The sooner the poison reaches the blood the more rapidly does it act, and it depends not so much upon the quantity as the amount absorbed in a given time. The time for this absorption, under favorable circumstances, is only a few seconds. The fatal effects are produced when the absorption takes place more rapidly than the elimination. The fatal proportion of poison present in the blood at any one time is infinitesimally small (one-sixteenth grain of strychnine has caused death in four hours). The blood is about one-thirteenth of the body by weight, and the proportion of the poison by weight compared with the blood would be less than one part in one million. The poison of a cobra is in even smaller proportion; yet the blood, urine, saliva or milk of an animal poisoned by a cobra, when injected into the blood of another animal, will produce death.

A GASOLINE FIRE is best extinguished with flour, sand or earth in the order named; water should not be used. If the gasoline be confined in small space, ammonia will smother it. Some users of gasoline find it well to hang a bottle containing about a gallon of ammonia from the top of the tank or room containing the gasoline, by a string or fusible link, so that if the gasoline takes fire the bottle will fall and be broken, releasing the ammonia and promptly putting out the burning gasoline.

In the U. S. patent office a rejected application is no longer considered a bar to a new application for a patent for the same invention.



## Agricultural Review.

### BUTTE.

**EARLY ORANGES.**—The Oroville Mercury notes the shipment of ripe oranges from that place on the 16th of October. They were shipped by E. Gilman from his Thermalito orange orchard, and the record is broken for ripe oranges in California and, perhaps, in the United States.

**DO ALMONDS PAY?**—Chico Record: Lowe Bros., who have an almond orchard in the suburbs of Chico, have forty Ne Plus Ultra trees, from which they gathered 2330 pounds of almonds. These nuts brought them 12 cents per pound, or \$279.60. H. A. Sanborn has only one almond tree, and it yielded him \$20.50 this year, the nuts being sold at 10 cents per pound.

**THRESHING AND BALING BROOM CORN.**—Biggs Argus, Oct. 18: H. S. Brink, with a force of six boys and three men, including himself, has commenced threshing and baling his forty-acre crop of broom corn, which had been previously stored in his barn until cured. The boys are employed in stripping the broom straw stalks of leaves, when they are placed on a table, where Messrs. Brink and Albers grasp each hand full of the butts and extend the straw over a revolving cylinder, run by W. J. Mauzy's upright boiler and engine, the teeth of which separate the seed from the straw, leaving it clean and ready for baling. The broom material is then placed in the baler, butts outward, at the two ends and the points of the straw lapping about half in the center, making bales when pressed and wired of from 88 to 120 pounds weight. Mr. Brink and his assistant, Will Thompson, constructed the threshing machinery and baler.

### CONTRA COSTA.

**CONTRA COSTA PRODUCTS.**—Brentwood Correspondence Martinez Press: A. E. Lobree has shipped five carloads of almonds, and has more in sight. George Shafer states that he has already shipped twenty-five carloads of almonds and will ship five carloads more. Shipments of dried apricots and peaches have been quite active of late, but a considerable quantity still remains to be sent to market. Gabe Meyer, the Antioch merchant, has bought and shipped fifteen carloads of almonds this season and is scouring the country for more.

### COLUSA.

**FRENCH WALNUTS.**—Colusa Sun, Oct. 17: W. W. Kilgore is raising French walnuts that are exceedingly fine. The shells are soft and the nut large. He has an orchard of 400 trees that have just this season come into bearing. C. P. Wilson also has 400 trees of the same kind. From now on these orchards will bring a good revenue. These walnuts are always in demand. A good revenue might be derived from the black walnut trees now growing in and around this town if only grafted to these trees. Mr. Conlin put in several hundred grafts this season and had good luck with them.

### KINGS.

**IMPORTING DAIRY STOCK.**—Hanford Journal, Oct. 19: J. A. Yoakum, general creamery superintendent for the San Joaquin Ice Co. of Fresno, which is now extensively engaged in the butter making business, arrived in this county Tuesday with 220 heifer calves, bred for dairy purposes. The heifers are of several different breeds, but all bred for dairy purposes. They are sold to farmers to increase the milk production of the creameries. The company has already sold 470 head, one carload going to Golindo, Fresno county, one to Traver, one to Fresno and three to Guernsey. There are 1400 head more to be sold by the company. Mrs. Miner, engaged in dairying 12 miles from Fresno, was the largest purchaser, she alone taking 225 head of the heifers, while another party took 150 head. In the counties of Fresno, Tulare and Kings the dairy business is assuming large proportions.

### FRESNO.

**RECEIPTS FOR RAISIN CROP.**—Since the 26th of Sept. there has been received \$824,987 by the association for this year's crop of raisins. To growers \$520,145 has been distributed. The largest receipts for a single day were \$80,000.

**PACKING HOUSE BURNED.**—Sanger Herald, Oct. 20: Thursday morning the big packing house at Del Rey station on the Valley road, owned by Castle Bros., was consumed by fire, together with all its contents, consisting of some thirty carloads of raisins, twenty tons of dried Muir peaches and other fruit too numerous to mention. The building was an imposing one, 200x100 feet in dimensions, having been built at the Midwinter Fair grounds and afterwards removed to Del Rey. No doubt, the building was insured, but as

the raisins contained therein were controlled by the association the greater portion of the loss will fall upon the growers.

**BIG WINERY BURNED.**—One of the largest fires that has ever occurred in Fresno took place on the night of Oct. 15th, when the Kohler & Frohling winery, about 4 miles northwest of town, was burned. It was the property of the California Wine Association and the loss is between \$100,000 and \$125,000, the insurance not known. There were 250,000 gallons of port wine stored in the building. The winery, machinery and tank were valued at \$50,000.

### LOS ANGELES.

**THE A. C. G. LEMON ASSOCIATION.**—Azusa Pomotrophic, Oct. 18: Information has come to hand from reliable authority that the A. C. G. Association of Glendora will join the A. C. Fruit Exchange, and that organization will hereafter market their output through the medium of the Southern California Fruit Exchange. The above association has extensive curing houses at Glendora. The officers of the A. C. Lemon Association are: T. L. Miller, president; S. J. West, vice-president; E. G. Kennard, secretary; Ernest Owens, manager.

### ORANGE.

**THE BEST IN WALNUTS.**—Santa Ana Blade, Oct. 19: J. N. Smith, the well-known fruit and honey buyer, has prepared for exhibition at the county fair and afterwards for a place in the Orange county exhibit at the Los Angeles Chamber of Commerce a sample of softshell walnuts grown in this neighborhood, which for size, quality and appearance are just a little ahead of anything so far shown here in that line. Mr. Smith makes four grades of the nuts he handles, and the best pass over a 1½-inch wire screen in grading, so that the size of each nut is greater than that in diameter. The nuts are bleached by the sulphur process, are beautifully bright in color, and are said to command 1½ cents a pound more in the Eastern markets than the product otherwise treated to remove discolorations. Mr. Smith bought eight tons of nuts from E. M. Kraemer of Anaheim, for which he paid 8½ cents a pound.

**PEANUT PICKING.**—Santa Ana Blade, Oct. 19: Ed Utt of Tustin is doing a rushing business in a peanut way. He is now engaged in harvesting the crop from ninety acres and has 100 men, women and boys engaged in picking. Thirty cents per sack is paid for picking. Mr. Utt expects to have 2600 sacks of nuts, 600 of which will be the yield of ten acres on the Maybury tract on First street. The peanut vines have been sold at \$1.50 per ton and from this source there will be enough to pay about half the cost of picking.

### SACRAMENTO.

**FRUIT SHIPMENTS.**—Sacramento Bee, Oct. 20: The rains of the present week have reduced the volume of grape shipments to the East, but yet they continue, four cars of the fruit going forward this morning. The shipments of plums have almost entirely ceased, and those of pears are steadily declining. Apples now compose about half the fruit shipments from northern and central California. A large proportion of the apples go to Denver, which is partial to California fruit. Apples are also going to England each week. For the seven days ending at 6 A. M. Oct. 20 the number of cars of fruit shipped East by way of the Central Pacific was 98, made up as follows: Plums, 1; pears, 19; grapes, 39; apples, 38; persimmons, 1. The car of Japanese persimmons was from Santa Barbara, the fruit being grown by Elwood Cooper. This is the second carload of persimmons shipped this season. The total of the deciduous fruit shipments of the present season is 6001 cars, against 6315 cars to the corresponding date last season, a decrease of 314 cars.

### SAN LUIS OBISPO.

**GUANO GATHERING PROFITABLE.**—San Luis Obispo Herald, Oct. 19: The gasoline schooner May of San Diego, Captain Frank Mana, arrived at Port Harford yesterday morning. Her mission is to collect guano from the rocks and cliffs along the coast. This is to be treated at the fertilizing works in San Diego and from there shipped to various points. Captain Mana has been engaged in gathering guano for some time along the coast of Lower California, but has changed his base of supply to California for the present. On the way up the coast he secured a partial load and expects to complete his cargo in the vicinity of Port Harford. The guano in its natural state is worth about \$20 per ton. Captain Mana states that while the deposits are not nearly as thick as farther south, good money can be made in gathering it along this coast.

**TREE PLANTING.**—Paso Robles Record: Many hundreds of trees will be planted this winter and with the help and good will of the people many more blocks will

be lined with shade and ornamental trees this season. The success of the trees planted last winter has been very encouraging and shows that the board knows how to carry on this work successfully. Very few of the trees were lost and the growth made is splendid. The Improvement Club will join the board in the work and the people generally should lend their assistance in every way possible.

### SAN JOAQUIN.

**A CHICKEN BEDBUG.**—Stockton Mail, Oct. 18: D. A. Learned, the well-known pioneer farmer, whose place is situated east of the city, has encountered a new kind of chicken pest, which plays havoc with the fowls. Mr. Learned says the pest is much like a bedbug, as it does not remain on the chickens during the day but attacks them at night when on the roost, retiring towards morning to some crack. The insect looks much like a bedbug, though it does not attack human beings. They are very difficult to get rid of, as they hide during the day in little cracks, and it is no easy matter to locate them. They are a great plague to the chickens, as they suck the blood, causing swellings on the fowls and making the feathers drop out.

### SANTA BARBARA.

**BET SUGAR.**—Santa Maria notes, Santa Barbara Press, Oct. 18: The sugar factory, though the run will not be any longer than last year, is running far more successfully. It is running without a hitch or break, and turning out all of 800 sacks a day. The sugar is shipped off as quickly as it is manufactured, Colorado making the main demand on it. The superintendent has kindly allowed the town merchants to have what they need in lots of one ton or over.

### SANTA CLARA.

**WILL RAISE APPLES.**—Gilroy Gazette, Oct. 19: John A. McKerron, who owns a large ranch in the Redwood district, is making preparations to plant about 10,000 apple trees this coming winter. The land and climatic conditions are especially adapted to the cultivation of that variety of fruit. In the past he has used the place entirely for recreation. Hereafter he proposes to utilize it as a means of profit.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian, Oct. 18: Newtowns are going out rapidly on European shipments. Eastern and foreign apple shipments for the past week were 38 cars; total for the season, 214 cars. The Horticultural Commissioners are outlining a vigorous campaign for pestless fruit. They are going to insist on clean trees, clean packing houses and clean boxes. There is to be a fight and a quarantine against pests. The future value of Pajaro orchards depends on their freedom from pests, and each orchard owner and each packer should work in complete accord with the Horticultural Commissioners in their zealous battle for orchard protection and clean fruit.

### SOLANO.

**BEETS A PRACTICAL FAILURE THIS YEAR.**—Solano Republican, Oct. 19: The harvesting of the beet crop in this vicinity has about come to a close and the output this year is far below what it should and would undoubtedly be in a normal year. The cause of the short crop is attributed to the drouth, or a lack of late spring rains. The rainfall last winter was not quite up to the average, but the fog and damp weather prevailed to such an extent that it was impossible to prepare the ground for the crop and but a small acreage was put in, the total not being over 1000 acres. After the beets were sown but little rain fell and in some fields the crop did not come up to do any good at all. Nowhere was the crop up to the average and in some of the fields it was too poor to pay the expense of harvesting. The best beets grown this year were on the Page tract. There were a few acres which averaged over ten tons to the acre, but the average yield throughout the district is but little over three tons. The percentage of sugar was very high, running from 18% to 26%, and this in a slight measure atones for the short yield. The crop here this year is even better than it is in other parts of the State, with the possible exception of the Watsonville district. The total yield in this vicinity will be from 3000 to 3500 tons. A new departure is being made in preparing for the coming season. The ground will be plowed in the fall before the rains begin, in fact the greater part of what will be sown to beets has already been plowed and the work is being rushed along to completion as rapidly as possible. The company expects to put in about 2000 acres in this vicinity and of that amount about 1500 acres have already been plowed. The plows are being put down to a depth of 10 or 12 inches. In the spring the land may be given another shallow plowing, all depending on the kind of winter which is experienced.

### SONOMA.

**A PROFITABLE VINEYARD.**—Cloverdale Reveille, Oct. 20: That vineyard property is a good paying investment this year is shown in the instance of G. Zolfo, who has twelve acres in vines and the receipts from his grapes figure up over \$1200. This is a good showing, and while we have no knowledge of any person doing any better we believe that other vineyards realized equally as good, acreage of course to be considered.

**SONOMA COUNTY PRODUCTS.**—Healdsburg Enterprise, October 20: There are about 500 acres of bearing blackberry and raspberry vines in Sonoma county, producing 1000 tons or 100 carloads of those fruits. These and strawberries are raised most largely in the light hill soil near Sebastopol and Green valley. Petaluma leads in dairy and stock interests. The stock ranges are in the northern end principally, with 30,000 cattle, 10,000 horses and 56,000 sheep. Annual butter shipments are 3,000,000 pounds, valued at \$1,072,000. Corn and oats are raised in large quantities for fodder. Hop sections are Santa Rosa, Sebastopol, Peachland, Forestville, Guerneville, Trenton, Fulton, Windsor, Healdsburg. All through these districts the deciduous fruits are grown with success.

### STANISLAUS.

**NEW CREAMERY.**—Modesto Herald, Oct. 18: J. M. Canty will this week receive a creamery plant and eighty-two cows lately purchased in San Luis Obispo and Santa Clara counties, and within a short period will receive 120 additional cows from the same quarter. He will supply cream to the San Francisco market daily; will buy cream (extracting it from the milk at his own cost) at 25 cents a quart.

### SUTTER.

**HEAVY FRUIT PACKING.**—Sutter County Farmer, Oct. 19: This has been a busy season at the Wilkie dryer and the old plant, with the additional buildings put up this year, have been crowded to their full capacity. The California Cured Fruit Association arranged with Mr. Wilkie to handle all the prunes brought there by the members of the association, and the bulk of the fruit is now cured and being packed under inspection of an officer of the State association. There will be about 1000 tons of dried prunes handled for the association members at that place, besides as much more raisins, prunes, peaches, etc., for outside parties.

### TULARE.

**WAREHOUSE BURNED.**—Alta Advocate, Oct. 19: The McNear warehouse at Roth Spur burned Saturday morning. The origin of the fire is unknown. There were between 40,000 and 50,000 sacks of wheat in store, all of which is a total loss. The amount of insurance and by whom insured is not known. The loss will fall heavily on the farmers, many of whom had their seed wheat stored there.

### VENTURA.

**HEAVY WAREHOUSE BUSINESS.**—Ventura Independent, Oct. 18: The warehouse has been a busy center this week, and thousands of sacks of beans have been received. On Thursday about 2000 sacks came in from the various ranches. As the farmers bring in their beans, now and then they report a few sacks being stolen. Beans are almost as good as gold this year and it is not very surprising that "Weary Waggles," as he comes along the roads lined on both sides with productive bean fields, with here and there a loaded wagon, takes it into his head to enrich himself with \$3 or \$4 worth of frijoles.

### YOLO.

**CREAMERY DIVIDENDS.**—Woodland Mail, Oct. 19: The directors of the Knights Landing Creamery met on Saturday and transacted their regular business. Nearly \$6000 was distributed among the patrons on the 15th, representing their share for the last month. The management have just finished putting in a new milk weigher, and there are other improvements being made, indicating that the creamery is in a flourishing condition.

## Horse Owners! Use

GOMBAULT'S

## Caustic Balsam

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circular. THE LAWRENCE-WILLIAMS CO., Cleveland, O.



## THE HOME CIRCLE.

### The Nameless Hero.

There are countless heroes who live and die  
Of whom we have never heard;  
For the great, big, brawling world goes by  
With hardly a look or word;  
And one of the bravest and best of all  
Of whom the list can boast  
Is the man who falls on duty's call,  
The man who dies at his post.

While his cheek is mantled with man-  
hood's bloom,  
And the pathway of life looks bright,  
He is brought in a moment to face the  
gloom  
Surrounding the final night.  
He buoyantly sails o'er a sunlit sea  
And is dashed on an unseen coast—  
Till the ship goes down at the helm stands  
he—  
The man who dies at his post.

Who follows the glorious tide of war  
And falls in the midst of fight,  
He knows that honor will hover o'er  
And cover his name with light.  
But he who passes unsung, unknown,  
Who hears no applauding host,  
Goes down in the dark to his fate, alone,  
The man who dies at his post.

Who bears with disease while death draws  
near,  
Who faces his fate each day,  
Yet strives to comfort and help and cheer  
His comrades along the way,  
Who follows his work while he yet may  
do,  
It seems to me is a hero true—  
The man who dies at his post.

There are plenty to laud and crown with  
bays  
The hero who falls in strife,  
But few who offer a word of praise  
To the crownless hero of life.  
He does his duty and makes no claim,  
And to-night I propose a toast  
To the silent martyr unknown to fame,  
The man who dies at his post.

—Denver News.

### The Man Alone.

The train was stopping longer than usual at the water tank, and the Man Alone stood in the door of his house on wheels, enjoying the treat. The long dust-covered cars usually paused only a few moments, and were then whirled on by the thirst-assuaged monster at their head, in the never-ending race across the continent. But to-day the dripping tube had clanked back against the iron hoops of the tank, and still the engine bell did not ring, and the blue-coated conductor was looking anxiously from his watch to the engineer and fireman, who had crawled under the wheels and were alternately hammering and swearing. A few passengers, clad in melancholy-looking linen dusters, and with soiled handkerchiefs about their necks, jumped from the platforms of the sleepers and made a little group about the engine, but most of the sweltering alkali-choked mortals in the porterless and comfortless day coaches were too languid to more than thrust their heads in the palpitating waves of heat that arose from the roadbed and to return cheerless reports of apparent disaster.

It did not occur to the Man Alone that he might join the little group and actually exchange a few words with human beings. He merely gazed, and caught himself counting the people and the windows in the ears, just as he had wearily tried and tried again the task of enumerating the shifting backs of the hundreds of sheep under his care. He remarked to himself that this was probably his last sight of the daily train for many months, as he had exhausted the feeding ground, and would have to move away to a location where the buffalo grass was more plentiful. Consequently he lingered so long and so intently in his farewell look that he did not notice a slender young woman who had leaped lightly from one of the rear coaches and was approaching with a baby on one arm and a small tin pail in her disengaged hand. When the Man Alone did spy her, she was so near that she frightened him, and he

could not muster strength to move from the door sill, against which he was leaning. The young woman came quite boldly to the edge of the steps that led from the door of the wagon to the ground, and the Man's knees nearly went from under him as two very brown and very determined eyes fastened their gaze upon him, augmented by a battery of infantile ones.

"Pardon me, but John Henry is very thirsty, and I wish to buy some milk for him," said the owner of the brown eyes.

The Man Alone was too near insensibility to more than gasp. The only woman he had seen in a whole year was the proprietor of the "hash counter" at Vermilion Creek, 12 miles down the track, and this vision in a neat gray traveling dress dazzled him.

"John Henry hasn't had anything to eat since he dropped his bottle and broke it, over a hundred miles from here," pleaded the owner of the brown eyes.

"I ain't got a thing but airtights—er, that is, canned milk, ma'am," said the Man Alone finally, drawing a deep breath after nearly every word. "Ef that'll do any good—"

Here his face took a sudden expression of horror and his long arm swept to a horizontal.

"Yer train's goin', ma'am!" he exclaimed, and the owner of the brown eyes turned, with a gasp of dismay, and saw the conductor swing himself on the last platform and enter the car door, while the engine puffed its way into the grim vista of sagebrush beyond the water tank.

"Gimme yer baby, ma'am, said the Man Alone, leaping to the ground, grasping the child from her arms, and starting after the disappearing cars. But the young woman stopped him.

"Don't waste the effort," she said. "The train is an hour behind time now, and won't return for the president of the road. Some one in the car told me that we would be delayed here at least ten minutes more, and I was willing to risk being left behind if I could get something for the poor baby. It's a crime for mothers to travel alone with children, isn't it?"

"Sure!" said the Man Alone, heartily, and then he endeavored to make amends. "Perhaps yer husband couldn't—"

The owner of the brown eyes laughed merrily.

"Oh, John Henry isn't my baby," said she. "His mother is a little slip of a woman who looked so forlorn that I have been sitting with her ever since we left Portland. My father is in the smoker, my traveling bag is in the sleeper, and here I am in the desert with a strange baby on my hands. Oh! this is a trifle more unconventional than usual, even for a Chicago girl."

"But Miss—Miss—"

"Miss Meredith. Father has been attending a Masonic convention at Seattle, and took me with him. He will doubtless get off at the next stopping place when he misses me, and so will John Henry's mother, if she can be kept from jumping from the moving train. How far is it to the next station?"

"Twelve mile," said the Man Alone, laconically. He could not remember many things as pleasant as that voice, and he dimly wished that it could keep right going on forever.

"Well, I want you to take me there," said the girl, consulting a pretty watch. "It's twelve now, and we ought to make it before dark."

The Man Alone took off his broad, leather-banded hat, and slowly scratched his head. He was not bad looking, in spite of a great scar which lost itself in his iron gray hair. Then he took a halter from the side wall of the wagon and scooped a hatful of oats from a box underneath.

"The ol' farm way's better'en ropin'," he explained. "Th' grass ain't up to the standard this year, an' the smell o' oats 'll almost bring th' wild horses down f'm the hills."

When he had gone Miss Meredith set John Henry in the shade of the wagon and then peeped in at the open door. "I've always been dying to find out how these Western shepherds

live," she said. "I wonder if he has a cook and an Alpine horn!"

She ran lightly up the steps and looked about the dark interior. A bunk, swung from the side wall by iron braces, evidently served the double purpose of bed and table, as blankets were heaped at one end and several dishes were carefully piled at the other. Miss Meredith shuddered at the sight of a repeating rifle, leaning in one corner, and then a slight noise at the door made her turn. The Man Alone was at the foot of the steps, with a raw-boned horse rubbing its nose lovingly against his shoulder.

"The nag was nearer'n I thought," he said, with a mere trace of irritation in his voice.

"I beg your pardon for being so curious," said Miss Meredith, as she descended and caught up John Henry, "but I've always wanted to know how you shepherds stand the hot summers and the cold winters. Isn't your life lonely?"

"Lonely!" exclaimed the Man as he backed the horse into the wagon shafts. "Why, yours is the first voice I've heard since—since—oh! I can't remember very far back."

"But you have dogs, and then the sheep are such dear things. They must be company."

"The dogs are all right, but they can't talk, an' th' sheep—why, lady, them sheep 'll drive a well man crazy in a year. I wasn't quite right in my head when I came here, or I'd been gone long ago. I ain't able to think back very far. Them sheep won't let me. When I git back 's far 's year ago I kind o' switch off and can't see anything but th' backs o' thousands o' sheep. Fust thing I know, I'm tryin' to count 'em. I count so many, an' then they all shuffle up an' begin all over. Then I feel like I got to take that gun an' go out an' shoot sheep right 'n left. I seen th' cowboys do that when my pardner drove a flock over the dead line onto cattle land. It'd been better if they'd shot him, too, for he got sheep backs in his head, an' went locoed. He killed his dogs an' all th' sheep he had cartridges fer, an' then he went up in th' hills an' froze."

"But don't you have any amusement?"

"Yes—I been seein' th' trains every day fer a month, but now I got t' move on th' range. I don't care much, for there ain't no real fun since they plugged up that water tank. I uster amuse myself by shooting holes through that. First I couldn't hit it every time, but purty soon I got it down, and could put a hole in it every lick. One day I pumped a hull chamber o' eartridges into it, an' there wasn't water enough left in it fer th' overland. I guess I had all th' big bugs o' th' road tellin' me what'd be done t' me if I didn't get a new target. These railroads don't keer anything for a sheep man's fun."

As he spoke he was deftly harnessing the horse, and then he lighted a red lantern and set it on the ground near the wagon, after which he called an intelligent-looking shepherd dog and spoke a few kindly words of caution.

"The lantern an' th' dog'll hold 'em all right," he said, as he assisted Miss Meredith to the wide seat under the overhanging top of the wagon and tossed John Henry into her lap.

When the wagon began to dip and plunge and curtsy over the rough trail, John Henry was delighted. His infant dreams had never pictured such splendid jolting, and the whimper which had begun to materialize, owing to the long-delayed dinner, now changed to the crow of gladness.

"Mighty good little chap, ain't he?" ventured the Man Alone, between clouds of alkali dust.

"He hasn't cried once during all that terrible railroad trip. Poor little fellow! His mother isn't as old as I am, but she has a gray streak in her hair. Her husband was a railroad man, and he disappeared just after John Henry was born. She's going to her folks in Trinidad, but it will break her heart to live there, as they believe her husband ran away, and she doesn't. Her name is Clark, and—"

Here Miss Meredith clutched the seat in terror, as the Man Alone had

dropped the reins and sent his hat sailing into the sagebrush and cactus, while the horse threatened to ditch the wagon at the trail side.

"Clark! Clark!" exclaimed the Man Alone, in a thick voice. "That's the name, by Glory! I kin think back now without them sheep interferin'. He was a railroad man, and he run out o' Salt Lake west. It's all plain to me now, an' I kin remember fallin' off them cars an' gittin' an awful crack on the head. Here, don't you hold that baby any more. He's mine. You give him to me an' drive—drive quick or them sheep'll be coming back into my head before I see my—my wife. Lar-rup that horse good! I want to git to the station wuss'n you do."—Arthur Chapman in Portland Oregonian.

### A Contrast.

Man's life is more in what he thinks,  
And woman's most in what she feels:  
He with his wit his logic links,  
She with her faith her reason seals.  
He by experience wisdom learns,  
She is intuitively wise;  
The occult truth for which she yearns  
She sees with her diviner eyes;  
And father into heaven gets;  
Too far for her to lose her way;  
While he, but on the parapets,  
Might fall outside—a soul astray.  
—Dwight Burdgo.

### A Tragedy of the Civil War.

Recalling the historic incident clustering about South Carolina's executive mansion, Mrs. Thaddeus Horton writes, in the Ladies' Home Journal, of the shocking tragedy that occurred there toward the close of the war. This was the death of the daughter of Governor Pickens immediately after her marriage to Lieutenant Le Roehelle. "On the afternoon preceding the evening of the marriage the Northern army began shelling Columbia, but preparations for the wedding continued. Finally the guests were all assembled and the clergyman was proceeding with the solemn ceremony, and had just joined the right hands of the happy pair, when, suddenly, there was an awful crash, and a shell from the enemy's cannon penetrated the mansion and burst in the middle of the marriage chamber, scattering its death-dealing missiles in every direction. There were screams and a heartrending groan; mirrors crashed; the house shook; women fainted; and walls rocked to and fro.

"When the first confusion was over it was discovered that in all the crowd only one person was injured, and that

## DON'T COUGH

Stop it with Scott's emulsion of cod-liver oil.

A little coughing is nothing—the tickling, that makes you cough once, is some dust; not the least harm. You scratch an itch, and forget it. This cough is scratching an itch.

But the cough, that hangs on and comes back, is the sign of an itch that hangs on and comes back. There is something that makes that itch.

Inflammation: a germ perhaps; it's alive; like a seed in moist warm ground; it will grow if you let it, especially in children.

We'll send you a little to try, if you like.  
SCOTT & BOWNE, 409 Pearl street, New York



was the bride herself. She lay partly on the floor and partly in her lover's arms, crushed and bleeding, pale but very beautiful, her bridal gown drenched with warm blood, and a great cut in her breast. Laying her on a lounge, the frantic bridegroom besought her by every term of tenderness and endearment to allow the ceremony to proceed, to which she weakly gave consent, and lying like a crushed flower, no less white than the camellias of her bridal bouquet, her breath coming in short gasps, and the blood flowing from this great, angry wound, she murmured 'yes' to the clergyman, and received her husband's first kiss. A moment more and all was over.

"She was laid to rest under the magnolias, and the heartbroken bridegroom, reckless with despair, returned to his regiment."

#### Martha Washington's First Husband.

"Westover it perhaps the most beautiful of all the celebrated Colonial homes of Virginia," writes Mrs. Thaddeus Horton, in the Ladies' Home Journal. "It was built by William Byrd, a Virginian of Virginians. The greatest of his many claims to distinction was his beautiful and beloved daughter Evelyn, perhaps the most celebrated belle of that day. She was educated in England, whither she accompanied her father on almost all of his trips as Colonial agent, and was presented at the court of George I. She had many lovers, and naturally many offers of marriage from men of distinction in the Old Dominion, for she was not only a beauty but an heiress. Her heart, however, was given, so it is said, to her cousin, Colonel John Custis, with whom she had a childish love affair, but whom she had not seen for some years, and she refused positively so marry any other man. Finally, quite in despair, her devoted father sought to arrange a marriage between her and the gallant Colonel Custis. For some reason that gentleman was quite indifferent to the match, and refused it altogether. It came to light latter, that during the years of their separation his fancy had become estranged from his erstwhile favorite Cousin Evelyn, and he was at the time of the overture from her father deeply in love with one Martha Dandridge, who soon afterward became his wife, and subsequently the wife of the illustrious George Washington. The beautiful Evelyn, on learning of Colonel Custis's indifference, pined and faded, and in spite of all the love lavished upon her by friends and family, died of a broken heart, and her body now rests in the old burying ground at Westover."

Use me, God, in Thy harvest field  
Which stretcheth far and wide, like a  
wide sea—  
The gatherers are so few I fear the pre-  
cious yield

Will suffer loss.  
Oh, find a place for me!

—Christina Rossetti.

Pendennis—Is dyeing the hair as dangerous as the doctors would make it out?

Warrington—Certainly; you may take my word for it. Only last spring an uncle of mine dyed his hair, and in three weeks he was married to a widow with four children!—Tid-Bits.

Miss Thirty-eight (coyly)—What a pity it seems, Mr. Somerset, that a man like you should be a bachelor!

Mr. Somerset—Yes, Miss Thirty-eight, it does seem a pity, but I can't help it. You know I was born so.—Harlem Life.

"What did Aunt Minerva say about the shirt-waist man?" "She said now he had to keep his belt in the right place all the time, he'd find out he wasn't any smarter than woman."—Indianapolis News.

He was a new freight handler. "Load those barrels in that car," ordered the freight agent. "Oi can't load barrels in that car, sor," responded the new man. "Why not?" "It's a box car, sor."—Chicago News.

#### Quatrain.

There were three men, pale prisoners of  
Sorrow;  
One cursed at Fate; himself one cursed;  
but one  
Forgot to curse in toiling toward the mor-  
row,  
And tunneling Despair, pierced to the  
Sun.

—Emerson Allen Warrenner.

### DOMESTIC ECONOMY.

#### Success in Canning Fruit.

When one is especially desirous of preserving the form and handsome appearance of the fruit, the jars should be filled to the lower part of the rim with the uncooked fruit, and the hot syrup poured over it to within one inch of the rim. Put the covers on loosely without the rubbers, and place the jars on a suitable frame in the bottom of a wash boiler. Pour in warm water up to the necks of the jars, and allow to boil gently from five to twenty minutes, according to the variety of fruit. Then remove, fill with boiling syrup to overflowing, wipe with a damp cloth, put on rubbers and seal immediately. Berries, cherries and currants should cook five or six minutes, plums, sliced rhubarb, sour apples (quartered) and peaches, about ten minutes, sliced quinces and sliced pineapples fifteen minutes, Bartlett pears (halved) and tomatoes twenty minutes, and Siberian crab apples a little longer. Shrinkage is greatly prevented by allowing the fruit to cool slowly; it is a good plan to cover the jars with a heavy cloth and leave them in a warm part of the kitchen to become gradually cool.—Good Housekeeping.

#### The Kitchen as it Should be.

When I furnish a kitchen as my work-room some idea as to convenience and the saving of time and steps modifies the arrangement of things. All the utensils are kept as near as possible to where they will be needed. The tin covers of saucepans and kettles are on a rack within reach of the range. The cooking forks and spoons have their niches just below. The little paring knife I like best is not in the knife box amid carvers and mixing spoons, but where I can get it without leaving the low rocker where I sit when preparing vegetables. The bread knife and cutting board (which last is apt to be the cover of a grape basket, light and clean) are always convenient to the bread jar. Two or three favorite saucepans are kept hanging abroad in full view near the water faucet, for is not the first step toward cooking almost everything the preparing for some freshly boiled water?—Good Housekeeping.

#### Hints to Housekeepers.

If a currant bush (not one bearing black currants) is tied up in a muslin cloth as the fruit begins to ripen, it will be preserved for weeks.

For apple sauce or apple tart two or three peach leaves stewed with apples give a delicious flavor, removing them of course before serving.

To broil oysters dry them, dip in melted butter and roll in cracker crumbs. Place on a buttered broiler, and broil for two minutes on each side.

One of the best ways to remove old paper is to dip a large and clean white-wash brush in warm water and apply it evenly to the wall before scraping with a kitchen knife. Holes in the plaster should be filled with plaster of paris, mixed with mortar.

Pies for summer use are best made by taking shells of puff paste, filling them with fresh fruit, such as cherries, currants, raspberries, huckleberries or blackberries, sprinkled with sugar and placing them in the oven until the fruit is cooked. These shells may be made at home in quantity and kept for future use, or purchased from the baker.

A delicious salad is made of potatoes, tomatoes and green peppers. Pare

and slice the potatoes and tomatoes. Wash and remove the seeds and chop fine one green pepper. Put them together into a bowl and season with salt and pepper and dress, tossing the ingredients lightly with a French dressing made of three parts of oil, two parts of vinegar, and onion juice, salt and pepper to taste. Serve on a bed of cress or lettuce.

Cucumber salad is frequently served from scooped out cucumber shells, which are cut in halves lengthwise. These should be buried in ice until they are wanted for the table. Chopped olives, thin strips of red pepper, nasturtium seeds and capers can be used as garnishes, while the shells should be served on beds of small, yellow lettuce leaves.

To cook a chicken in a chafing dish, cut it into four pieces and season it thoroughly with salt or pepper. Melt in the dish two scant tablespoonfuls of butter and add to it a teaspoonful of chopped onion. Put in the chicken and cook slowly, turning frequently until tender. Then mix the yolk of one egg with one-half cupful of cream and cook for one minute with the chicken. Add one-half tablespoonful of lemon juice just before serving.

A mistake that many housekeepers make is the wasting of time and strength in "fancy cooking." If pies, puddings and cakes were reserved as dainties for special occasions and feast days, instead of a part of the daily menu, how much labor would be saved and how much health would be gained! A simple salad or some fresh fruit would be vastly more healthful and much less trouble to provide. Yet it is generally in the households where economy is an object that the useless and expensive pies and cakes abound.

To obtain the perfume from any favorite flower is possible with little trouble, if one has an abundance of flowers. The blossoms should be picked without a stem and dropped into a jar half full of olive or almond oil. After standing in that until the next day, they should be put into a coarse cloth and squeezed dry over the bottle of oil. Then fresh flowers should be added and the operation repeated until the required strength is obtained. The oil is then to be mixed with an equal quantity of pure rectified spirits. This should be shaken every day for three weeks, when it may be turned off and bottled for use.

Succotash as served by the average cook is merely cut corn and young Lima beans cooked together. To get the real flavor of this truly delicious dish the ears of corn, half a dozen perhaps, or seven if small, to a pint of beans, are first scored down each row with a sharp knife, then the tender pulp or kernel is pressed out from the ear. The cobs are then put into a quart of boiling water and cooked hard for twenty minutes. Remove the cobs, and in this water boil the beans for half an hour. Now add the corn, and cook a few minutes longer. Season with pepper, a piece of butter the size of a walnut, and half a teacup of thick cream. Thus prepared, the dish has all the flavor of the old-fashioned suc-

cotash, lacking the heavy richness that comes from boiling with pork and a stronger flavored bean, as was the formula of our grandmothers.

Customer—I told you I wanted my eggs boiled no longer than three minutes. These are as hard as rocks.

Waiter—Perhaps the kitchen clock is slow, sir.—Credit Lost.

"Karl, I'm actually ashamed to go out with my old hat. It's so out of style!" "Has the cook the afternoon out to-day?" "No." "Then why don't you borrow hers?"

Willie—Pa, what is the difference between "insurance" and "assurance?"

Pa—Well, the latter is what the agent has, and the former is what he tries to sell you.

### The Whole Story in one letter about

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## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Oct. 24, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

|                | Nov.            | Dec.            |
|----------------|-----------------|-----------------|
| Wednesday..... | 74 3/4 @ 74 3/4 | 75 3/4 @ 74 3/4 |
| Thursday.....  | 74 3/4 @ 73 3/4 | 74 3/4 @ 73 3/4 |
| Friday.....    | 73 3/4 @ 73 3/4 | 74 3/4 @ 73 3/4 |
| Saturday.....  | 73 3/4 @ 74     | 73 3/4 @ 74     |
| Monday.....    | 74 3/4 @ 73 3/4 | 74 3/4 @ 73 3/4 |
| Tuesday.....   | 73 3/4 @ 71 3/4 | 73 3/4 @ 72 3/4 |

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

|                | Dec.        | Feb.       |
|----------------|-------------|------------|
| Wednesday..... | 6s 1 1/4 d  | 6s 2 1/4 d |
| Thursday.....  | 6s 0 3/4 d  | 6s 1 1/4 d |
| Friday.....    | 6s 0 3/4 d  | 6s 1 1/4 d |
| Saturday.....  | 6s 0 3/4 d  | 6s 1 1/4 d |
| Monday.....    | 6s 0 3/4 d  | 6s 2 d     |
| Tuesday.....   | 5s 11 1/2 d | 6s 0 3/4 d |

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

|                | Dec., 1900.     | May, 1901.          |
|----------------|-----------------|---------------------|
| Thursday.....  | 97 1/2 @ 97     | 1 04 1/4 @ 1 03 3/4 |
| Friday.....    | 96 3/4 @ —      | 1 04 @ 1 03 3/4     |
| Saturday.....  | 97 1/2 @ 98 3/4 | 1 04 1/4 @ 1 05 1/4 |
| Monday.....    | 98 @ 97 1/2     | 1 04 1/4 @ 1 04 3/4 |
| Tuesday.....   | 96 3/4 @ 97 1/2 | 1 03 3/4 @ 1 03     |
| Wednesday..... | 97 1/2 @ 97 1/2 | 1 04 @ 1 03 3/4     |

## WHEAT.

With the top figures quotable for shipping wheat below the dollar mark, the general condition of the market is discouraging. There are few farmers who under present circumstances can manage through a wheat crop to get back a new dollar for an old one. As it has been in times past and probably will be more or less in the future, there is too much acreage devoted to wheat for the world's requirements. The Pacific coast is particularly unfortunate with her surplus wheat, in being so remote from a market, with very heavy freight rates to contend against, owing to the present great scarcity of shipping, the United States and European governments having a large fleet of vessels monopolized as transports. Even with shipping in fair supply, we would still be seriously handicapped, owing to the long time required to get merchandise from here to Europe. A canal across the Isthmus is sorely needed to bring our producers closer in touch with the leading markets of the world. Then and not till then will our farmers be in a proper position to compete with most other countries in the growing of wheat. It would not require then as now an expenditure of nearly 50c to carry less than a dollar's worth of wheat from tidewater to a foreign market. The United States visible supply east of the Rockies is reported having increased during the week 1,335,000 bushels. The world's shipments showed a decrease for the week of 1,184,800 bushels.

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

|                      | 1899-1900.            | 1900-01.            |
|----------------------|-----------------------|---------------------|
| Liv. quotations..... | 6s 3 1/4 d @ 6s 1 d   | 6s 5 1/4 d @ 6s 8 d |
| Freight rates.....   | 36 1/4 @ 38s          | 42 1/4 @ 43 1/4 s   |
| Local market.....    | \$1 07 1/2 @ 1 08 3/4 | \$0 93 1/4 @ 96 1/4 |

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

|                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------|
| December, 1900, delivery, 98 3/4 @ 96 3/4 c.                                                                                      |
| May, 1901, delivery, \$1.05 1/2 @ 1.03.                                                                                           |
| Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at 97 1/2 @ 97 3/4 c.; May, 1901, \$1.04 @ 1.03 1/2. |

|                                     |                 |
|-------------------------------------|-----------------|
| California Milling.....             | \$1 00 @ 1 05   |
| Cal. No. 1 shipping, alongside..... | 93 3/4 @ 95     |
| Oregon Valley.....                  | 93 3/4 @ 96 1/4 |
| Washington Blue Stem.....           | 1 00 @ 1 02 1/2 |
| Washington Club.....                | 1 00 @ 1 02 1/2 |
| Of qualities wheat.....             | 95 @ 97 1/4     |

## FLOUR.

As compared with supplies and offerings, neither the movement outward nor into consuming channels locally is of large proportions. Shipments to the Orient are fully up to, if not slightly above, the average, the last China steamer taking nearly 15,000 barrels. On the other hand, the Central and South American trade is comparatively light. Prices show no quotable decline, but market is weak at current figures.

|                                |               |
|--------------------------------|---------------|
| Superfine, lower grades.....   | \$2 25 @ 2 50 |
| Superfine, good to choice..... | 2 60 @ 2 80   |
| Country grades, extras.....    | 3 15 @ 3 40   |
| Choice and extra choice.....   | 3 40 @ 3 65   |
| Fancy brands, jobbing.....     | 3 60 @ 3 75   |
| Oregon, Bakers' extra.....     | 2 90 @ 3 25   |
| Washington, Bakers' extra..... | 2 90 @ 3 40   |

## BARLEY.

Although there have been no radical changes developed in the Barley market during the week under review, there has been a slightly better tone, feed descriptions selling at full current rates in more instances, or nearer thereto, as a rule, than for several weeks preceding. Offerings were largely common feed qualities, and it was the exception where this description was crowded upon buyers. Chevalier is in such light stock as to hardly admit of a quotation. Brewing of high grade is offered sparingly, most holders contending for more than current rates quotable.

|                                 |                   |
|---------------------------------|-------------------|
| Feed, No. 1 to choice.....      | 70 @ 72 1/4       |
| Feed, fair to good.....         | 65 @ 67 1/4       |
| Brewing, No. 1 to choice.....   | 80 @ 85           |
| Chevalier, No. 1 to choice..... | 97 1/4 @ 1 02 1/4 |
| Chevalier, No. 2.....           | 85 @ 90           |
| Chevalier, poor.....            | 70 @ 75           |

## OATS.

The firmness of the market is fully as pronounced as previously noted, with every prospect of so continuing throughout the season. The supplies in this center are not heavy and are not as a rule being urged to sale, a large proportion being held against future needs. Market for choice to select qualities is especially strong and favorable to sellers.

|                               |                     |
|-------------------------------|---------------------|
| White Oats, fancy feed.....   | 1 37 1/2 @ 1 42 1/4 |
| White, good to choice.....    | 1 30 @ 1 35         |
| White, poor to fair.....      | 1 20 @ 1 27 1/4     |
| Gray, common to choice.....   | 1 20 @ 1 32 1/4     |
| Milling.....                  | 1 35 @ 1 42 1/4     |
| Surprise, good to choice..... | 1 40 @ 1 45         |
| Black Russian.....            | 1 12 1/4 @ 1 25     |
| Red.....                      | 1 15 @ 1 32 1/4     |

## CORN.

Supplies remain of light volume and are principally Eastern product, representing purchases to arrive by millers and dealers. Former quotations remain in force. That the market will soon develop any material weakness is not probable.

|                                      |                 |
|--------------------------------------|-----------------|
| Large White, good to choice.....     | 1 22 1/2 @ 1 25 |
| Large Yellow.....                    | 1 20 @ 1 22 1/4 |
| Small Yellow.....                    | 1 50 @ —        |
| Eastern, in bulk (carload lots)..... | 1 14 @ 1 17     |

## RYE.

No large quantities offering, but an abundance for the immediate demand at current values, which are barely steady.

|                          |                 |
|--------------------------|-----------------|
| Good to choice, new..... | 87 1/4 @ 92 1/4 |
|--------------------------|-----------------|

## BUCKWHEAT.

There is virtually nothing doing in this cereal and consequently little upon which to base quotations. Offerings of choice would meet with prompt attention from millers.

|                     |             |
|---------------------|-------------|
| Good to choice..... | 1 85 @ 2 10 |
|---------------------|-------------|

## BEANS.

There are tolerably free arrivals of new crop beans, mainly Lady Washingtons, Bayos and Pinks, and while the market is naturally not strong at this early date in the season, it is showing less weakness than was generally anticipated. This is more particularly the case as regards white beans, which are in good request on Eastern account. The markets East are very lightly stocked and firm. Limas are being very steadily held, with supplies small in this center.

|                                  |             |
|----------------------------------|-------------|
| Pea, fair to good, 100 lbs.....  | 3 75 @ 4 00 |
| Small White, good to choice..... | 3 75 @ 4 00 |
| Lady Washington.....             | 2 50 @ 2 85 |
| Pinks.....                       | 2 15 @ 2 30 |
| Bayos, good to choice.....       | 2 10 @ 2 25 |
| Reds.....                        | 2 50 @ 2 75 |
| Limas, good to choice.....       | 5 20 @ 5 30 |
| Black-eye Beans.....             | 3 00 @ 3 25 |
| Horse Beans.....                 | 1 75 @ 2 00 |
| Garhanzos, large.....            | 2 00 @ 2 25 |
| Garhanzos, small.....            | 1 25 @ 1 75 |

Recent advices by mail from New York give the following report of the bean market, prices quoted being per 60-lb bushel:

The demand has called for more stock than has arrived and the general market has been quite active and firmer. Marrow made an advance of 10c., and for several days past choice lots have sold quickly at \$2.50; indeed, there is still a shortage, and buyers are compelled to engage stock to arrive. Only a few small shipments of Medium have come forward and these were quickly placed at \$2.15; the unusual scarcity of this stock makes so strong a feeling that a few spot goods might bring a little more money. Pea have continued to sell well and buyers have frequently had to secure stock to arrive; \$2.10 has been the current trading basis throughout the week, with a steady feeling at the close. Early sales of old Red Kidney for export were at \$2.25, then the price jumped to \$2.30, and some business has been done on that basis. A few lots of new Reds have come forward, but the market for them is not clearly defined as yet. White Kidney very scarce and higher. Occasional sales of Yellow Eye reported at \$2.25. Turtle Soup firmly held, but quiet. California Lima are taken just as fast as

they come in; firm at \$3.60. Scotch peas have ruled generally easier, but stock has cleaned up well and they close steady.

## DRIED PEAS.

There are few domestic offerings, but five or six carloads of Eastern are announced on the way to local millers, causing an easier tone to prevail.

|                             |             |
|-----------------------------|-------------|
| Green Peas, California..... | 2 50 @ 2 75 |
| Niles Peas.....             | 1 90 @ 2 10 |

## WOOL.

Although there is no activity to report, it is gratifying to note that the market has developed a little change for the better. Two operators have been taking hold of Fall clip in moderate quantity. A lot of Humboldt Fall was closed out at 12 1/2c., and there was considerable middle county Fall transferred, mainly within range of 9@10c. It is hoped the business of the past week will prove the forerunner of at least a fair amount of activity in the near future.

## SPRING.

|                                      |         |
|--------------------------------------|---------|
| Humboldt and Mendocino.....          | 16 @ 17 |
| Northern, free.....                  | 14 @ 15 |
| Northern, defective.....             | 12 @ 13 |
| Middle Counties, free.....           | 14 @ 15 |
| Middle Counties, defective.....      | 11 @ 13 |
| Southern, 12 mos.....                | 8 @ 10  |
| Southern, free, 7 mos.....           | 9 @ 11  |
| Southern, defective, 7 mos.....      | 8 @ 9   |
| Oregon Valley, fine.....             | 17 @ 18 |
| Oregon Valley, coarse to medium..... | 16 @ 17 |
| Eastern Oregon, choice.....          | 13 @ 16 |
| Eastern Oregon, fair to good.....    | 10 @ 12 |
| Nevada, as to condition.....         | 11 @ 15 |

## FALL.

|                        |        |
|------------------------|--------|
| Middle County.....     | 9 @ 10 |
| San Joaquin.....       | 7 @ 9  |
| San Joaquin Lambs..... | 8 @ 9  |

## HOPS.

No trouble is experienced in securing custom for prime to choice hops, provided sellers are not too exacting in the matter of prices. Sales at extreme current quotations, however, are not readily effected, and are only possible in a wholesale way where the quality is of the very best. While Eastern and foreign markets are reported moderately firm, they are not very active.

|                               |         |
|-------------------------------|---------|
| Good to choice 1900 crop..... | 12 @ 15 |
|-------------------------------|---------|

The following review of the hop market, coming through by mail of recent date, is from a New York authority:

The New York City market has not become well settled as yet. Brewers are very slow to begin their fall buying. Malt is higher, the internal revenue tax on beer is considerable and the higher price asked for hops as compared with last year tend to make a conservative feeling among the largest brewers of the country. There is some looking around by exporters and an occasional purchase, but the course of the English market has seemed to hold in check the buying on foreign account. Notwithstanding the usually light movement for the season of year there is quite a firm undertone to the market and sellers are content to await developments. Statistically the situation looks strong, and there is quite general feeling that when the very great shortage in the English crop is more fully appreciated there will be largely increased export business. The markets in the interior of this State are a little firmer, and more hops are changing hands in range of 13 1/2@16c. generally, a few fancy growths going higher. Better weather has permitted baling, but the demand for sacking has not been supplied to any extent as yet. More samples of the new hops have been shown this week and it looks as if we shall have more medium qualities than were expected. Prices are a little higher in Oregon and there is considerable movement. Latest advices from London report quiet trading, but the market is showing increased firmness. An advance of 5 marks is cabled from Germany.

## HAY AND STRAW.

Receipts of hay are of more moderate volume than for some time past, and offerings are as a rule meeting with prompt custom at full current rates. The market shows healthy tone, being firm at the quotations. A shipment of 16,676 bales went forward for Asia on Government account. Straw is arriving sparingly and is selling to fair advantage.

|                      |              |
|----------------------|--------------|
| Wheat.....           | 9 00 @ 13 50 |
| Wheat and Oat.....   | 9 00 @ 12 50 |
| Oat.....             | 8 00 @ 12 50 |
| Barley.....          | 7 00 @ 9 00  |
| Volunteer.....       | 6 00 @ 7 50  |
| Alfalfa.....         | 7 00 @ 8 50  |
| Stock.....           | 5 50 @ 7 00  |
| Compressed.....      | 9 00 @ 13 00 |
| Straw, 3/4 bale..... | 35 @ 45      |

## MILLSTUFFS.

Market for Bran showed easier tone, with stocks on the increase and demand not particularly active. Middlings and Shorts ruled quiet at unchanged figures. Values for Rolled Barley and Milled Corn were well sustained at rates quoted.

|                    |               |
|--------------------|---------------|
| Bran, 3/4 ton..... | 15 50 @ 16 50 |
| Middlings.....     | 16 50 @ 20 00 |

|                     |               |
|---------------------|---------------|
| Shorts, Oregon..... | 16 00 @ 17 0  |
| Barley, Rolled..... | 16 00 @ 16 50 |
| Cornmeal.....       | 26 00 @ —     |
| Cracked Corn.....   | 27 00 @ —     |

## SEEDS.

There is no evidence of much doing in this line. Values throughout remain practically as last noted. Mustard Seed is in very light stock and mostly under choice. Flaxseed continues in fair receipt, most of it representing deliveries on contracts. Alfalfa Seed is in too scanty supply to be quotable. Utah Alfalfa could not be laid down in this market at present much under 10c.

|                       |             |
|-----------------------|-------------|
| Mustard, Trieste..... | 4 00 @ —    |
| Mustard, Yellow.....  | 5 00 @ —    |
| Flax.....             | 2 00 @ 2 50 |
| Canary.....           | 3 1/4 @ 4   |
| Rape.....             | 2 @ 3       |
| Hemp.....             | 3 1/4 @ 4   |

## BAGS AND BAGGING.

The market throughout is quiet. Difficulty in securing sailing vessels from Calcutta for this port is causing a firmer tone to prevail on Grain Bags for next season's delivery. This year's requirements for bags of all descriptions have been practically filled.

|                                                    |        |
|----------------------------------------------------|--------|
| Calcutta Grain Bags, huyer June-July...            | —@—    |
| Calcutta Grain Bags, spot.....                     | 5½@—   |
| San Francisco Grain Bags, 22x36, spot.....         | 5½@ 5½ |
| State Prison Bags in lots of 2000, ¾ 100... 5 65@— |        |
| Wool Sacks, 4 lbs.....                             | —@32¼  |
| Wool Sacks, 3½ lbs.....                            | —@28¼  |
| Fleece Twine.....                                  | 7¼@—   |
| Gunnies.....                                       | —@12¼  |
| Bean Bags.....                                     | 4½@ 5¼ |
| Fruit Sacks, cotton.....                           | 6¼@ 7¼ |

## HIDES, PELTS AND TALLOW.

Market is quiet for Hides and Pelts, and is devoid of noteworthy firmness, quotations remaining as before. Values for Tallow are showing steadiness, the demand at current rates being sufficient to absorb all offerings.

## HONEY.

There is no lack of demand, and there is little offering, either on the spot or to arrive. Market is firm at unchanged rates, with values largely nominal for Water White, owing to scarcity of supplies. A sailing vessel departed the current week for Liverpool with 100 cases Extracted.

|                              |                 |
|------------------------------|-----------------|
| Extracted, White Liquid..... | 7 1/4 @ 8       |
| Extracted, Light Amber.....  | 6 1/4 @ 7 1/4   |
| Extracted, Amber.....        | 5 1/2 @ 6 1/4   |
| White Comb, 1 lb frames..... | 13 @ 14         |
| Amber Comb.....              | 11 1/2 @ 12 1/2 |
| Dark Comb.....               | 8 @ 9           |

## BEESWAX.

Stocks remain light and there is not the remotest probability of there being any excess of offerings the current season.

|                                    |         |
|------------------------------------|---------|
| Good to choice, light, 3/4 lb..... | 26 @ 28 |
| Dark.....                          | 24 @ 26 |

## LIVE STOCK AND MEATS.

Market for Beef remains much as last noted, supplies proving ample for immediate demand. Mutton is quotably unchanged, with market moderately firm at ruling rates for choice, trim stock. Veal was in increased receipt, but there was no quotable decline. Hog market was without quotable improvement, being governed by conditions at Eastern packing points.

|                                               |               |
|-----------------------------------------------|---------------|
| Beef, first quality, dressed, net 3/4 lb..... | 6 @ —         |
| Beef, second quality.....                     | 5 1/4 @ —     |
| Beef, third quality.....                      | 5 @ —         |
| Mutton—ewes, 6 1/2 @ 70; wethers.....         | 6 1/4 @ 7 1/4 |
| Hogs, hard grain fed, medium.....             | 5 1/2 @ 5 1/4 |
| Hogs, small, fat.....                         | 5 1/2 @ 5 1/4 |
| Hogs, large, hard.....                        | 5 1/4 @ —     |
| Hogs, feeders.....                            | 5 @ 5 1/4     |
| Hogs, country dressed.....                    | 6 1/4 @ 7     |
| Veal, small, 3/4 lb.....                      | 6 @ 8 1/4     |
| Veal, large, 3/4 lb.....                      | 7 @ 8         |
| Lamb, spring, 3/4 lb.....                     | 8 @ 8 1/4     |

## POULTRY.

Eastern poultry was in much lighter receipt than preceding week, and there were no heavy arrivals of California stock. There was considerable Eastern carried over, however, from previous heavy arrivals, and this operated against the development of any pronounced firmness. At the same time, the market at this date presents a much better tone than a week ago.

|                                     |             |
|-------------------------------------|-------------|
| Turkeys, live hens, 3/4 lb.....     | 14 @ 15     |
| Turkeys, live gobblers, 3/4 lb..... | 14 @ 15     |
| Turkeys, Old, per lb.....           | 11 @ 12 1/4 |
| Hens, California, 3/4 dozen.....    | 4 00 @ 5 00 |
| Roosters, old.....                  | 3 50 @ 4 00 |
| Roosters, young (full-grown).....   | 3 50 @ 4 50 |
| Fryers.....                         | 3 25 @ 3 50 |
| Broilers, large.....                | 3 00 @ 3 25 |
| Broilers, small.....                | 2 00 @ 2 50 |
| Ducks, old, 3/4 dozen.....          | 3 00 @ 4 00 |
| Ducks, young, 3/4 dozen.....        | 3 50 @ 4 50 |
| Geese, 3/4 pair.....                | 1 50 @ 1 75 |
| Goslings, 3/4 pair.....             | 1 75 @ 2 00 |
| Pigeons, old, 3/4 dozen.....        | 1 00 @ —    |
| Pigeons, young.....                 | 1 50 @ 2 75 |

## BUTTER.

Prices for fresh product have suffered further declines since last review. Job-



bers and retailers are anxious to close out stocks of held and packed butter during the next sixty days, and in consequence the demand for fresh is very limited, with positive inquiry confined mainly to a few very favorite brands.

|                                           |    |     |
|-------------------------------------------|----|-----|
| Creamery, extras, # lb.....               | 27 | @—  |
| Creamery, firsts.....                     | 25 | @26 |
| Creamery, seconds.....                    | 23 | @24 |
| Dairy, select.....                        | 24 | @25 |
| Dairy, seconds.....                       | 21 | @22 |
| Dairy, soft and weedy.....                | —  | @—  |
| Mixed store.....                          | 16 | @17 |
| Creamery in tubs.....                     | 20 | @22 |
| Pickled Roll.....                         | 20 | @21 |
| Flrkin, California, choice to select..... | 20 | @21 |
| Flrkin, common to fair.....               | 17 | @18 |

CHEESE.

Market is quite firm for choice new and steady for old. Mild-flavored new of high grade is in light stock and special marks in favor with consumers are commanding in a small way higher rates than are warranted as regular quotations.

|                                   |       |         |
|-----------------------------------|-------|---------|
| California, fancy flat, new.....  | 11    | @12     |
| California, good to choice.....   | 10    | @11     |
| California, fair to good.....     | 9 1/2 | @10     |
| California Cheddar.....           | —     | @—      |
| California, "Young Americas"..... | 10    | @12 1/2 |

EGGS.

Market was very stiff for strictly fancy fresh, with sales up to 42c in a small way and occasionally a little higher, but eggs which ran irregular as to size and color, or which were not forwarded promptly from ranch or hennery, would not command anything near top figures. Eastern and cold storage eggs were offered freely and at generally easy rates.

|                                                 |        |     |
|-------------------------------------------------|--------|-----|
| California, select, large, white and fresh..... | 42 1/2 | @—  |
| California, select, irregular color & size..... | 35     | @40 |
| California, good to choice store.....           | 25     | @30 |
| Eastern, as to section and grading.....         | 20     | @26 |
| Eastern, cold storage.....                      | —      | @—  |

VEGETABLES.

The receipts of vegetables are not very extensive or varied at present. Such changes as were effected in quotable rates were in the main to firmer figures. Onions brought improved prices. Tomatoes sold at a sharp advance, under limited offerings of choice stock. Mushrooms arrived in small quantities and brought comparatively good figures.

|                                        |      |        |
|----------------------------------------|------|--------|
| Beans, String, # lb.....               | 2    | @ 3    |
| Beans, Wax, # lb.....                  | 2    | @ 3    |
| Beans, Lima, # lb.....                 | 2    | @ 3    |
| Cabbage, choice garden, # 100 lbs..... | 1 00 | @ 1 25 |
| Cauliflower, # dozen.....              | 50   | @—     |
| Cucumbers, Bay, # box.....             | 35   | @ 60   |
| Egg Plant, # box.....                  | 30   | @ 60   |
| Garlic, # lb.....                      | 4    | @ 5    |
| Onions, Yellow Danver, # cental.....   | 55   | @ 80   |
| Okra, Green, # box.....                | 30   | @ 60   |
| Peas, Sweet, garden, # lb.....         | 3    | @ 4    |
| Peppers, Green Chile, # box.....       | 30   | @ 60   |
| Peppers, Bell, # lb.....               | 35   | @ 65   |
| Squash, Summer, # large box.....       | 75   | @ 1 00 |
| Tomatoes, River, # large box.....      | 50   | @ 75   |

POTATOES.

The market for potatoes continued weak, with offerings in excess of immediate requirements. The wharfinger ordered some stocks off the dock into warehouse, which will involve an expense of about 10c per sack. Oregon is beginning to forward in moderate quantity, and increased arrivals are expected from that quarter in the near future. Sweet potatoes were in liberal supply and market favored buyers.

|                                       |    |        |
|---------------------------------------|----|--------|
| Burbanks, River, # cental.....        | 30 | @ 55   |
| Burbanks, Petaluma-Tomales.....       | 35 | @ 60   |
| Burbanks, Salinas, # cental.....      | 75 | @ 1 00 |
| Burbanks, Oregon, # cental.....       | 55 | @ 85   |
| Sweet Potatoes, Yellow, # cental..... | 75 | @ 1 00 |

The Fruit Market.

FRESH FRUITS.

The Apple market is rather heavily stocked with fair to medium qualities, and for these descriptions is lacking in firmness. Choice to select of favorite varieties, uniformly large and sound, packed four tiers to the box, are not plentiful, and command tolerably firm figures, market for such stock being firm at the rates quoted. Pears were in fair supply and market was easy. Watsonville Winter Nels in 40-lb. boxes were not quotable over 75c. Peaches were practically out and could not be quoted. Grapes were in fair supply, considering the date, and sold at generally unchanged rates. Persimmons were in moderate receipt, with demand for them not very active, and sales at top quotations were the exception. Pomegranates moved slowly at about the same range of prices last quoted. Berries were in light receipt, but there was no marked improvement in prices. Melons were in poor request and cheaper, the weather being against them.

|                                          |       |         |
|------------------------------------------|-------|---------|
| Apples, fancy, 4-tier box.....           | 1 00  | @ 1 25  |
| Apples, good to choice, # 50-lb box..... | 60    | @ 90    |
| Apples, common to fair, # 50-lb box..... | 25    | @ 50    |
| Cantaloupes, # crate.....                | 75    | @ 1 50  |
| Grapes, Tokay, # box.....                | 30    | @ 65    |
| Grapes, Rose of Peru, # box.....         | 30    | @ 65    |
| Grapes, Black Hamburg, # box.....        | 30    | @ 65    |
| Grapes, Zinfandel, per ton.....          | 22 00 | @ 27 00 |
| Grapes, Muscat, # box.....               | 30    | @ 65    |

|                                       |      |         |
|---------------------------------------|------|---------|
| Raspberries, # chest.....             | 5 00 | @ 7 00  |
| Nutmeg Melons, # crate.....           | 50   | @ 85    |
| Plums, Coe's Late Red, # box.....     | 40   | @ 65    |
| Pears, Winter Nels, # box.....        | 50   | @ 90    |
| Pears, common kinds, # box.....       | 30   | @ 75    |
| Persimmons, # box.....                | 40   | @ 75    |
| Pomegranates, # small box.....        | 40   | @ 75    |
| Pomegranates, # orange box.....       | 1 00 | @ 1 75  |
| Quinces, # box.....                   | 25   | @ 50    |
| Strawberries, Longworth, # chest..... | 8 00 | @ 10 00 |
| Strawberries, Large, # chest.....     | 3 00 | @ 5 00  |
| Whortleberries, # lb.....             | 5    | @ 7     |
| Watermelons, # 100.....               | 4 00 | @ 12 50 |

DRIED FRUITS.

The week under review could not well have been more quiet and uneventful than it has been in the cured and evaporated fruit line. So far as trading in offerings from first hands is concerned, there has been practically nothing doing. The cause most generally assigned for the inactivity is the national political contest now nearing a close, numerous buyers setting up the claim that they do not wish to be caught with large stocks on hand in the event of any great depression or business paralysis being experienced after election. Others say nothing as to cause, but do not buy. There is no fear that the country will go to smithereens, but business is more or less unfavorably affected during every national political campaign, some lines more so than others, dependent largely to the extent values are regulated by duties. While business in nearly all lines of merchandise is temporarily slow, it is more than probable that a just comparison with conditions during previous political contests in the nation would show that dullness has been less marked and of briefer duration up to date than during some of the previous campaigns of the past twenty years. That most of the existing stocks of dried fruit will be required during the season there is little or no doubt, but for the time being the producer finds little or no opportunity for unloading. Values remain notably in same position as at date of last review, but prices are necessarily largely nominal, owing to the prevailing inactivity. As to the tone of strength or weakness, Apricots and Pears may be said to represent the extremes of the market. Apricots are in light stock and held with confidence. Pears are quite plentiful and good qualities were never obtainable at lower values than this season. Prunes are proving no exception in the matter of dullness for the moment. Non-Association Prunes are obtainable in limited quantities at 2 1/2 @ 5 per cent under Association figures for small Prunes and the four sizes, while a still greater discount from Association rates is to be had in some instances for large Prunes, the price fixed for 40-50s admitting of heavier cuts than the Association rate for 100-120s. With the Association controlling most of the product, the present irregular prices will likely last only a very brief time.

EVAPORATED OR BLEACHED.

|                                                          |       |          |
|----------------------------------------------------------|-------|----------|
| Apricots, Royal, prime.....                              | 6 1/2 | @ 7      |
| Apricots, Royal, choice, in sacks, # lb.....             | 7 1/2 | @ 8      |
| Apricots, Royal, fancy.....                              | 9     | @—       |
| Apricots, Moorpark.....                                  | 9 1/2 | @ 11 1/2 |
| Apples, in 50-lb boxes, rings, pressed, fancy.....       | 5 1/2 | @ 5 1/2  |
| Apples, 50-lb boxes, rings, pressed, good to choice..... | 4 1/2 | @ 4 1/2  |
| Figs, White, fancy pressed.....                          | 6     | @ 7      |
| Nectarines, # lb.....                                    | 4     | @ 6      |
| Peaches, unpeeled, fancy.....                            | 6     | @ 6 1/2  |
| Peaches, unpeeled, choice.....                           | 5     | @ 5 1/2  |
| Peaches, peeled, in boxes.....                           | 11    | @ 14     |
| Pears, unpeeled Bartlett's, halved, fancy.....           | 6     | @ 6 1/2  |
| Pears, halved, unpeeled Bartlett's.....                  | 5     | @ 5 1/2  |
| Pears, quartered, unpeeled Bartlett's.....               | 4 1/2 | @ 5 1/2  |
| Plums, Black, pitted.....                                | 4 1/2 | @ 5 1/2  |
| Plums, White and Red.....                                | 5 1/2 | @ 6 1/2  |
| Prunes, Silver.....                                      | 4 1/2 | @ 6      |

COMMON SUN-DRIED.

|                        |   |         |
|------------------------|---|---------|
| Apples, sliced.....    | 3 | @ 3 1/2 |
| Apples, quartered..... | 3 | @ 3 1/2 |
| Figs, Black.....       | 2 | @ 2 1/2 |
| Figs, White.....       | 3 | @ 3 1/2 |
| Peaches, unpeeled..... | 4 | @ 5     |

Prices for new crop Prunes, as named by the California Cured Fruit Association: Santa Clara four sizes, 3c. per lb.; 40-50s, 7c.; 50-60s, 5 1/2c.; 60-70s, 3 3/4c.; 70-80s, 3 1/4c.; 80-90s, 2 3/4c.; 90-100s, 2 1/4c.; 100-120s, 2c., which is the uniform price for this grade; Sonomas, other than smallest, 1/2c. less; other districts, 1/4c. less, except for smallest; Ruby, 1/2c. premium.

Recent mail advices from New York City furnish the following review of the dried fruit market:

Evaporated apples have had more demand this week, and with moderate offerings market has ruled somewhat stronger though prices without material improvement; strictly prime are selling mainly at 4 1/2c. though some holders asking more, and stock barely prime has sold from 4 1/2c. down, common as low as 3 1/2c.; small sales of choice to fancy reported in range of 4 1/2 @ 6c. Prime evaporated are firmer for future delivery, stock being wanted to cover shipments on previous contracts, and market firm at 4 1/2c. for October and November delivery; some sales were made for these months' delivery at high prices, say 5 1/2 @ 6c. and exporters are anxious to get strictly prime fruit to cover these sales and would pay a premium. Sun-dried apples in light supply and quiet; southern quarters

worth about 3 1/2c. and northwestern 4c. in barrels, with dealers wanting stock on this basis; sun-dried sliced range from 3 @ 4c. as to quality. Old chops and waste generally poor and receiving little attention; new quoted to arrive at \$1.25 for chops and 95c. @ \$1 for waste with latter having a little more attention than heretofore. Small fruits continue in limited supply and firm. The weather has been unfavorable for any material improvement in California fruit and market generally quiet, though stock is held steady.

|                                                   |       |         |
|---------------------------------------------------|-------|---------|
| Apricots, Cal., Moorpark, 1900.....               | 9     | @ 14    |
| Apricots, Cal., Royal, 1900, # lb.....            | 8     | @ 9     |
| Peaches, Cal., unpeeled, 1900, in bxs, # lb.....  | 7     | @ 9 1/2 |
| Peaches, Cal., unpeeled, 1900, in bags, # lb..... | 7     | @ 9     |
| Prunes, Cal., # lb.....                           | 3 1/2 | @ 8 1/2 |

RAISINS.

The inquiry is reported less brisk than a week or two ago, but there is still a fair movement on holiday account. The market remains firm, with prospects of so continuing. The quality of the raisins now being distributed, the first crop, was never better if as good as this season. The second crop is now being secured, the quality and quantity of the same hinging on the weather of the coming fortnight.

F. O. B. FRESNO DELIVERY.—CARLOAD LOTS.

|                                              |      |    |
|----------------------------------------------|------|----|
| Imperial Clusters, 6-crown, # 20-lb box..... | 3 00 | @— |
| Dehesa Clusters, 5-crown.....                | 2 50 | @— |
| Fancy Clusters, 4-crown.....                 | 2 00 | @— |
| London Layers, 3-crown, # box.....           | 1 60 | @— |
| do do 2-crown, # box.....                    | 1 50 | @— |
| (Usual advance for fractions.)               |      |    |

|                                             |   |         |
|---------------------------------------------|---|---------|
| Loose Muscatel, 4-crown standard, # lb..... | — | @ 7     |
| Loose Muscatel, 3-crown.....                | — | @ 6 1/2 |
| Loose Muscatel, 2-crown standard.....       | — | @ 6     |
| Loose Muscatel, seedless.....               | — | @ 6 1/2 |

(Above prices for loose raisins are for 50-lb boxes.)

Thompson Seedless.—Bleached fancy, # lb., 12c; choice, 11c; standard, 10c; prime, 9c. Unbleached, 9c.

Sultanas.—Bleached fancy, # lb., 10 1/2c; choice, 9 1/2c; standard, 8 1/2c; prime, 8c. Unbleached, 8c.

CITRUS FRUITS.

New crop Navel oranges are now on market from both southern and northern California, being the earliest receipts on record. Only small quantities, however, have arrived. In a limited way comparatively fancy figures are being realized. Lemon market shows weakness, with stocks heavy, especially of common qualities. Limes continue in good supply and are being offered at low figures.

|                                       |      |        |
|---------------------------------------|------|--------|
| Oranges—Navel, # box.....             | 2 50 | @ 4 50 |
| Valencia, # box.....                  | —    | @—     |
| Seedlings, # box.....                 | —    | @—     |
| Lemons—California, select, # box..... | 2 75 | @ 3 00 |
| California, good to choice.....       | 1 75 | @ 2 50 |
| California, common to fair.....       | 75   | @ 1 50 |
| Limes—Mexican, # box.....             | 4 00 | @ 4 50 |
| California, small box.....            | 50   | @ 75   |

NUTS.

Values for almonds and walnuts remain as last quoted, the market showing healthy condition. The walnut crop is proving lighter than early estimates. Chestnuts are in fair receipt and lower.

|                                            |        |          |
|--------------------------------------------|--------|----------|
| California Almonds, shelled.....           | 24     | @ 27     |
| California Almonds, paper shell, # lb..... | 13     | @ 15     |
| California Almonds, soft shell.....        | 10 1/2 | @ 12 1/2 |
| California Almonds, hard shell.....        | 7      | @ 8      |
| Walnuts, White, soft shell.....            | 8 1/2  | @ 10 1/2 |
| Walnuts, White, California, standard.....  | 7 1/2  | @ 10     |
| Chestnuts, California Italian.....         | 8      | @ 10     |
| Peanuts, California, fair to prime.....    | 5      | @ 6      |
| Peanuts, Eastern, hand-picked.....         | 6      | @ 6 1/2  |
| Pine Nuts.....                             | 5      | @ 6      |

WINE.

There have been no new developments in the wine market since date of last review. Nothing has yet been done, so far as made public, which would enable giving quotations for this season's wine. Second crop grapes are coming forward in moderate quantity, the quotable range for dry wine stock ranging from \$20 @ 27 per ton for fair to select, San Francisco delivery. Receipts of wine at this port during month of September were 825,800 gallons, as against 900,100 gallons for corresponding month last year. Receipts for nine months ended Oct. 1st were 10,290,200 gallons, and for corresponding period in 1899 were 11,557,800 gallons.

Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

| FOR THE WEEK.         | Since July 1, 1900. | Same time last year. |
|-----------------------|---------------------|----------------------|
| Flour, 1/4 sacks..... | 119,506             | 1,815,680            |
| Wheat, centals.....   | 166,190             | 1,651,150            |
| Barley, centals.....  | 188,759             | 1,951,838            |
| Oats, centals.....    | 15,735              | 336,380              |
| Corn, centals.....    | 3,680               | 25,045               |
| Rye, centals.....     | 1,430               | 89,472               |
| Beans, sacks.....     | 47,218              | 148,005              |
| Potatoes, sacks.....  | 43,937              | 487,286              |
| Onions, sacks.....    | 5,219               | 91,047               |
| Hay, tons.....        | 4,950               | 71,851               |
| Wool, bales.....      | 2,130               | 15,585               |
| Hops, bales.....      | 601                 | 4,142                |

EXPORTS BY SEA.

| FOR THE WEEK.           | Since July 1, 1900. | Same time last year. |
|-------------------------|---------------------|----------------------|
| Flour, 1/4 sacks.....   | 76,352              | 907,380              |
| Wheat, centals.....     | 132,241             | 1,529,669            |
| Barley, centals.....    | 157,469             | 1,239,953            |
| Oats, centals.....      | 6,565               | 40,679               |
| Corn, centals.....      | —                   | 5,222                |
| Beans, sacks.....       | 48                  | 5,761                |
| Hay, bales.....         | 7,925               | 57,327               |
| Wool, pounds.....       | —                   | 233,621              |
| Hops, pounds.....       | 31,226              | 236,261              |
| Honey, cases.....       | 119                 | 1,460                |
| Potatoes, packages..... | 4,068               | 27,311               |

California Dried Fruit at New York.

NEW YORK, Oct. 24.—Evaporated apples, common, 3 @ 4c; prime wire tray, 4 1/2 @ 5 1/2c; choice, 5 1/2 @ 6c; fancy, 6 @ 6 1/2c.

California dried fruits.—Movement is not very brisk, but prices rule steady.

Prunes, 3 1/2 @ 8 1/2c.

Apricots, Royal, 11 @ 14c; Moorpark, 15 @ 17c

Peaches, unpeeled, 6 @ 9c; peeled, 16 @ 20c.

The Way to Succeed.

In the course of a stirring address at the Maywood colony celebration, to which we alluded last week, Rev. S. T. Brewster said: "Let every one study Prof. Wickson on 'California Fruits.' Let every one read the PACIFIC RURAL PRESS, even if he has to deny himself something to do so."

PIPESTONE, MINN., August 6, 1900.

DR. S. A. TUTTLE, Boston, Mass.

DEAR SIR:—Enclosed find draft, for which kindly send me three dozen Tuttle's Elixir, three dozen Family Elixir, one dozen White Star and two dozen Condition Powders. I am having great success selling these remedies, and for the past year have been selling them with this guarantee: that, after using one-fourth of the bottle they are not satisfied with the benefit which they derive from it, I will take back the balance and refund the money. So far, not a single bottle has been returned, which I think speaks very highly for the remedy. Yours truly, WALTER WHITFORD.

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## THE POULTRY YARD.

### Timely Suggestions.

TO THE EDITOR:—Another season in poultrydom is about to close and the dawn of a new one is at hand. It is not too early to make plans for the immediate future. Without plan, without system, there will be little profit in the poultry yard. Here, as in other vocations, a haphazard method of procedure will be attended with very unsatisfactory results.

So it is well to have an ideal and to work up to it, though a long time may be required to bring about the desired results. But, then, there is great satisfaction in attaining success along the line of breeding, whether it be for broilers or for layers, for beauty or form, or for wonderful plumage. Of course, at the foundation one must of necessity have good stock—fowls that are well bred and in the line which the individual poultryman wishes to pursue.

**NEW BLOOD.**—Is there not great danger of inbreeding, and is there not very frequently seen the evil effects of this carelessness in many flocks? The temptation to breed from a certain cock, because he has excellent points, notwithstanding that he is too near of kin to the hens, often presents itself. But it is mistaken policy, as not a few poultrymen will acknowledge. The progeny of such mating is liable to be weak, slow to mature, very susceptible to many of the ills to which poultry is subject. Better, by far, to spend a few dollars each year in introducing, from some reputable flock, new blood.

**How MANY?**—Again, in mating breeding hens there is a disposition on the part of not a few to put too many hens with the young cockerel or the more mature cock. Men long in the business, men who have been very successful breeders, differ on this point. Shall it be fifteen, or twelve, ten, or only half a dozen? Not a few poultrymen will advise one to put not more than from six to ten hens in the breeding pen, asserting—and with reason—that the progeny of such mating will be stronger, have more vigor, will more readily escape the ills incident to the life of the chick, will make better layers, and will be unsurpassed as breeders. Here, as is often the case elsewhere, it pays to make haste slowly.

**VERMIN.**—In many localities at the approach of winter those very unwelcome pests and enemies of the chicken yard, rats, endeavor to take up their abode in or under hen houses or other buildings about the premises. There is this to be said about their extermination: It will pay, and pay wonderfully well to hunt them out and kill them, or drive them away, just as soon as the first signs of their presence are discovered. If the poultryman is dilatory, careless in this matter—procrastinates

after Mexican fashion—these worse than worthless vermin will rapidly increase in numbers and prove very destructive. There is an old proverb, "A stitch in time saves nine," for the truth of which many poultrymen will vouch.

How to get rid of them is often a question. But one must drive them away or kill them, or they will almost surely destroy many valuable chicks before the season is over. A rat terrier or a fox terrier will do wonders in the way of exterminating rodents. Some persons use powdered copperas, sprinkled in the runs of the rats, with good results. The writer has proved the value of poisoning squash seeds and placing them in rat holes. The seeds are only partially split open, lengthwise, a few grains of strychnine inserted and the sides pressed together. Rats are fond of these seeds and one can safely place them in the runs, for there is little danger of any other thing eating them.

There are many varieties of traps, but the rat is a very shrewd animal and knows how to keep clear of traps of any kind—and yet, not always. One of the best traps is the common steel one, the jaws having no teeth. Place this in the runs, covered slightly with fine dirt. Or, what is better, placing the trap in an old milk pan, cover it with bran. Mr. Rat will put his foot—or two feet, often—into the trap, and there you have him.

**SCRATCHING SHED.**—Do not fail to attach a scratching shed to the chicken house before the rains come, if you have not already done so. To yarded fowls, especially, summer as well as winter, this shed is a grateful luxury and a source of profit to the owner of the flock, for it keeps the fowls in good exercise and seems to afford them much pleasure.

**MARKETING EGGS.**—Eggs have brought good prices all the season and have reached good-paying figures. One is apt now to acknowledge that it is a profitable investment to have even a small flock. But there are ways and ways adopted in marketing eggs. The person who receives the best prices is the one who, in the first place, has fowls that lay large, white eggs. Then he is careful to gather the eggs each day, putting them in a cool place until they are marketed. Before they are shipped he sees that each egg is clean, that the small ones are excluded from the cases, and that the entire contents of the box present an attractive appearance. These eggs will bring top prices. It will pay one to take a little extra pains here, and to do so with each shipment. Soiled or stained eggs can be readily cleaned by rubbing them with a cloth moistened with strong vinegar. A. WARREN RONINSON.

Napa, Oct. 19.

### The Poultry Crop in the Central West.

As this has direct effect upon California prices, we take from the report of Sprague Commission Company of Chicago a statement of the conclusions arrived at from inquiries sent throughout Illinois, Iowa, Indiana, Wisconsin, Missouri, Arkansas, Tennessee, Kentucky, Ohio, Michigan, Kansas, Nebraska, Minnesota and the Dakotas. It is claimed to be a reliable and unbiased opinion and indicates, from all the reports received, a smaller supply of ducks and geese, about an average supply—possibly a little smaller—of chickens, and a larger supply of turkeys than the crop of 1899. Weather conditions have a great deal to do with the production of poultry, and as the spring was very wet in some sections and dry in others the crop was somewhat irregular, according to the different conditions. Not alone did dry and wet weather affect poultry raising, but the extreme hot weather throughout some parts of the country was an important factor, as the reports indicate that the eggs were much affected and the fertility impaired so that the hatching of young stock was below that of other years, but the quantity of eggs put out to hatch exceeded that in former years in the case of turkeys and chickens, which made up for the loss,

otherwise there would have been a much larger quantity raised. Of ducks and geese, the supply is smaller. In the Southern States—Tennessee and Kentucky—the crop is far below an average, estimated fully 30% less, and this was due to the partial failure of the grain crops in 1899 and high prices locally for feed.

**TURKEYS.**—The crop of turkeys will no doubt be heavier this year than last—say about 110% to 115% as compared with last year—an increase of 10@15%, and will be nearer a full crop than in the three years preceding. High prices acted as an incentive for farmers to increase their turkey crop. The season, on the whole, has been a little favorable, and then more turkeys were carried over on which to build up a larger crop. Advices, however, again indicate that the crop in many sections will be late.

**CHICKENS.**—As compared with last year's crop, we do not think the supply of chickens will vary much—possibly it will be smaller on account of the unfertility of the eggs and the small supply in the Southern States. It would, perhaps, be fair to place the crop of 1900 at about 100% as compared with last year. Prices for eggs were not so high during the early part of the season as last year, and this influenced farmers to give more eggs to the hens for hatching purposes, but unfavorable causes brought about unfavorable results, and a great many eggs proved worthless. High prices for chickens in 1899 also induced farmers to market rather closely, and there were not so many chickens left over for hatching purposes.

**DUCKS.**—The crop of 1900 bids fair to be 20% short of last year. This may be going to extremes, but nearly all reports indicate a falling off, and to place the crop at 80, as compared with last year, may not be out of the way. The crop of 1898 was very large, way above the average of previous years, and for two years there has been an inclination to shut off on the raising of ducks, and it is likely this will be noticed during the marketing of the present crop, and that more satisfactory prices will prevail than in the past.

**GEESSE.**—In nearly all instances the reports note a further shrinkage in the supply of geese, and the crop is estimated at 10% less than last year, or about 80 as compared with two years ago. There was a decrease of about 10% last year, making about 20% less than in 1898, when there was about a full average crop.

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## AGRICULTURAL ENGINEER.

### How to Build Good Roads.

By WM. JUSTICE, County Supervisor, at the Farmers' Institute at Escondido.

In building a road the first thing to be considered is its location, a mistake in locating a road may cost the taxpayers large sums of money and never get a satisfactory road. I hope this discussion will lead to broader views on the subject.

I think we are sometimes so anxious to have the road located where it will benefit us most at present, or do us the least damage, that we overlook the importance of locating it on the best ground. Some one has said that no ground is too good for a road. As a result of mistakes in locating roads we have now in the fourth road district three roads leading to Palomar mountain, or rather from the base to the top of the mountain, two of which ought to be vacated; one to the Escondido reservoir, one to Guejito and two out of the San Pasqual valley ought also to be vacated. The cost of these grades must have been thousands of dollars, but they are so steep and narrow as to render them dangerous. I think the people ought to get together and co-operate to get the road in the best place.

Those steep grades before mentioned are not cited to find fault with any of my predecessors, for I do not know who built them; it is roads we are discussing, not men. There is one thing evident to me, that is, we have too many roads or not enough money, I suppose both are true.

In my opinion we should have a law classifying the roads into three classes. Class one should be State roads, built and kept in repair with State funds. Class two should be county roads, built and kept in repair by a tax levied on all the property of the county. Class three should be district or neighborhood roads, built and kept in repair by a direct tax levied on the property of the district and a road poll tax which may be worked out if preferred. Class one should be under the supervision of the county surveyors of the counties through which they pass. Class two should be under the supervision of the board of supervisors, and class three should be under the management of a road overseer or some other local management.

I think there will be no disagreement as to classes one and three, but there may be some objection to taxing incorporated cities for road purposes. But I should place the cities in a catalogue with districts which must help to build and keep in repair both State and county roads, and in addition must build and care for their own roads. It would seem but fair that cities should help in like proportion on the State and county roads and in addition keep up their own streets. I think a system of good roads leading to a town or city tends to build up business of all kinds; then I believe that it is as much to the interest of the cities that country people should come to their places of business as it is important that country people should have a market and a good road to get to it. And by thus doing away with sectionalism, and city and country uniting heart, hand and purse we could bring about such a revolution in road building and care as to result in very great improvement in the near future, and with such bright prospects for San Diego becoming a great com-

mercial city we should strike now with all our might and never be satisfied with present conditions. I feel greatly indebted to the cheerful kicker's protest against present conditions. Continue still to point out the mistakes and blunders and "show us the more excellent way."

But I wish to return to the subject of locating roads. It appears from the records that deeds to right of way for roads had never been recorded until within the last five years, and in some instances we have been compelled to buy the right of way for roads that we thought the county owned, at least they had been declared public highways by the board of supervisors and worked with public funds, and sometimes we are obliged to pay an exorbitant price or enter into an interminable lawsuit to condemn the right of way. One instance I have in mind, which was begun four or more years ago, was recently dismissed, and still no road. Now, in my opinion, there should be a maximum price established by the Legislature, based upon the assessed valuation of the land (say two or three times as much as it is assessed for), and the damage assessed as now by disinterested appraisers or viewers sworn to faithfully and impartially perform their duty.

Roads have in some instances been laid out without the least regard for the necessity for their construction, the number of people they would accommodate, the sums of money they would cost, or the territory they would develop.

I wish now to consider the subject of funds for road building. The tax we are now permitted by law to levy for road purposes is little more than enough to keep in repair the roads as they are now, and to contemplate any radical reform or build any Macadams or Telfords would require funds far in excess of any sum the board of supervisors has ever at any one time had its disposal; hence, before any of these great improvements are made there will have to be some methods adopted to supply more funds. We have voted bonds in the past upon which we are still paying interest. I should certainly not favor bonds until every other or at least some other plan had been tried. I think permission should be granted by the Legislature to counties to issue scrip, based on the assessed value, not to exceed 1%.

I am sorry that the Legislature repealed the "wide-tire law." I think it ought to have been amended so as to exempt old wagons and refer only to new wagons and those built or sold in the State after the law took effect. Ten States in the Union have at different times enacted wide-tire laws, and some of them have been in operation for a long time, at least long enough to thoroughly test their utility. I refer particularly to New York, Ohio, Indiana, Kentucky, Vermont, Michigan, Pennsylvania, Massachusetts and California. I admit that there are instances, perhaps, where a wagon with a wide tire will draw heavier than one with a narrow tire, for instance, where the ground is soft enough for the wide tire to cut through; but in all other places, except those referred to, the wide tire draws lighter than the narrow. If there were no difference in this respect the benefits to the roads are such as to urge their use. Indiana, Kentucky,

Vermont, Pennsylvania and Massachusetts all make distinction in favor of the wide tire. Experiments made in New York are very much in favor of wide tires. Thorough scientific tests were made by the Studebaker Wagon Co. on June 1 and 2, 1892, which resulted in favor of wide tires. Experiments have been made in Ohio, Missouri and Vermont, in each instance with the same result. Austria, France, Germany, Switzerland and Canada (according to Consular reports), all favor wide tires, and some of them have laws enforcing their use, France in particular. I quote from a report: "Every freighting or market cart here is a road maker; its tires are from 4 to 10 inches wide. With the few four-wheeled freight vehicles used the tires are rarely less than 6 inches in width and the rear axle is about 14 inches longer than the fore, so that the rear or hind wheels run in a line an inch outside the level rolled by the fore wheels." Whether we have a wide-tire law or not every person ordering a new wagon should insist on having wide tires.



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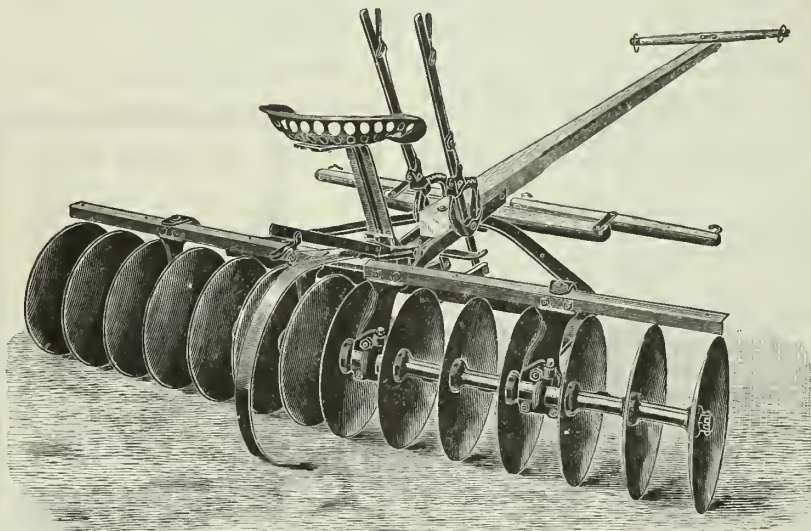
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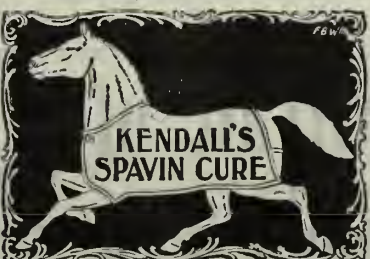
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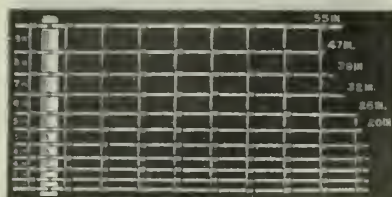
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## Patrons of Husbandry.

### Sonoma Pomona Grange.

The Pomona Grange recently held an all day session at Santa Rosa, of which the Press-Democrat says: At noon a bounteous harvest feast was served, which was very much enjoyed by the visitors. The election of officers resulted in the choice of the following: H. Johnson, Petaluma, Master; W. H. Skinner, Healdsburg, Overseer; A. R. Galloway, Healdsburg, Lecturer; Mrs. C. D. Grover, Petaluma, Chaplain; Peter Hansen, Bennett Valley, Steward; Harvey Gregory, Santa Rosa, Assistant Steward; Miss Fannie Gamble, Santa Rosa, Secretary; G. N. Whittaker, Bennett Valley, Treasurer.

The visitors included Mr. and Mrs. H. Johnson, Mr. and Mrs. C. D. Grover, Mrs. D. M. Winans, Will Winans, Mrs. E. A. Williams of Petaluma, Mr. and Mrs. W. D. Houx of Two Rock, F. S. Burnham and Miss Emily Burnham, A. R. Galloway of Progressive Grange of Healdsburg, Mr. and Mrs. Peter Hansen and Mr. and Mrs. G. N. Whittaker of Bennett Valley.

The retiring Master, W. D. Houx of Two Rock, served faithfully for two years and did much work in the interest of the Patrons of Husbandry.

### The National Grange.

Worthy Master Worthen of the State Grange informs us that the thirty-fourth session of the National Grange will convene at Washington, D. C., on Wednesday, Nov. 14, 1900. In accordance with established precedent, the Priests of Demeter of the Order of Patrons of Husbandry will meet in grand assembly on Friday evening, Nov. 16, at 7:30 o'clock, for the purpose of conferring the seventh, or Degree of Ceres, upon all applicants who are eligible thereto. Members who have received the sixth, or Degree of Flora, are entitled to this degree upon the payment of \$1, accompanied with a certificate bearing the name of applicant, residence, town, county and State, and time and place of having received the sixth degree. All applications must be approved by the Master of the State Grange in whose jurisdiction the applicant resides, and should be filed with the Annalist or his assistants at the National Grange session.

### San Jose Grange.

The meeting of San Jose Grange last Saturday was well attended. The Mercury says that a statement was made that W. H. Mills, who has done so much for the State at the Paris Exposition, greatly desired the appointment of a California Commissioner to the Buffalo Exposition, which is to be held next year, to conduct a bureau of information about California.

There was considerable discussion of


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this matter, and the unanimous opinion was that California would be neglectful of her opportunities if she did not establish such bureau with a competent chief in charge. On motion, it was determined that it is to the interest of California that an exhibit be made at Buffalo and that a bureau of information be established in connection with it. It was further resolved that Prof. C. W. Childs be selected to have charge of the exhibit and bureau. This was adopted by a unanimous vote, as well as a resolution that all Grangers and fruit growers take similar action. It is now almost certain that the National Grange meeting will be held at Buffalo during the term of the exposition.

There was quite a discussion of the proposed amendments to the Constitution to exempt Stanford University from taxation. The consensus of opinion was that Stanford should be exempt from taxation, though several speakers said that if the university was to be exempt from taxes the State should have control of it. At a late hour the discussion had not been terminated, and it was determined to continue it. This week there is to be initiation in the third and fourth degrees. After this there will be a harvest feast for members only. After the regular exercises there will be a resumption of the question of exempting certain institutions from taxation. It was stated that representatives of Stanford would be there, possibly President Jordan.

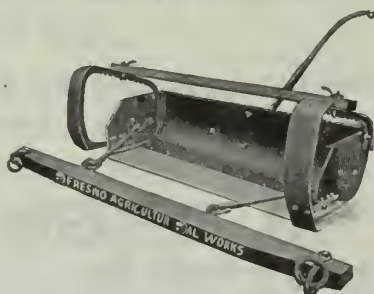


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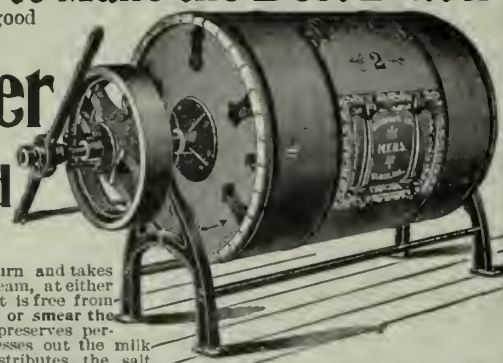
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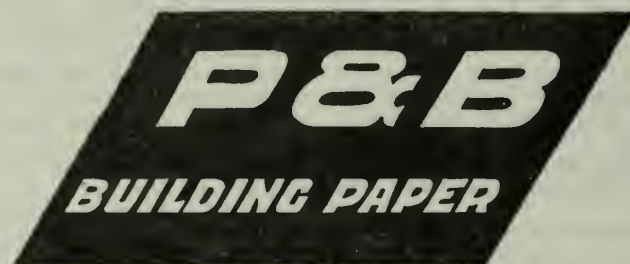
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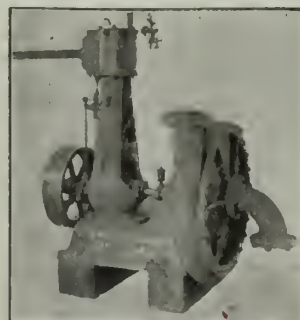
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## THE VETERINARIAN.

Answers by Dr. Creely.

## A GOOD CONDITION POWDER.

TO THE EDITOR:—Will Dr. Creely kindly give a subscriber a good all-around condition powder for a cow?—SUBSCRIBER, San Jose.

Take powdered gentian root, 4 oz.; charcoal, 2 oz.; powdered columba, 1 oz.; powdered ginger, 2 oz.; powdered elecampane, 1/2 oz.; bicarbonate soda, 4 oz.; iron sulphate, 2 oz.; granulated sal nitre, 8 oz. Mix; give a teaspoonful two times per day in feed.

## Large Stone in Horse's Jaw.

Twelve years ago one of Mr. Snider's horses had a severe attack of distemper. After his recovery Mr. Snider noticed a small lump on his jaw, also other small ones on different parts of his anatomy. The enlargement on his cheek continued to grow very slowly for the past twelve years until a few days since Mr. Snider noticed that the skin had broken, and, upon examination, found a rock within. Enlarging the aperture with his pocket knife, he was surprised to find it as large as a good-sized potato, which it much resembles in shape and appearance. At first glance every one who sees it pronounces it a petrified potato. It weighs 1 pound 3 1/2 ounces. Horses are subject to developments of this nature, and it is called stone in the jaw; but this one is so remarkably large that it excites much comment.—Davisville Enterprise.

## List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
PIONEER PATENT SOLICITORS  
FOR PACIFIC COAST.

FOR THE WEEK ENDING OCT. 9, 1900.

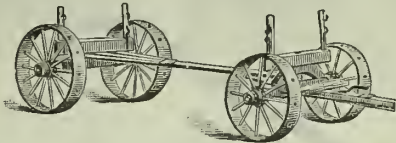
- 659,598.—FRUIT PITTER—W. Anderson, Scappoose, Or.  
659,572.—HOTEL REGISTER—J. Bullock, Manvel, Cal.  
659,359.—CARBONATION VAT—Burr, Stut & Atkinson, S. F.  
659,360.—LIME TANK—Burr, Stut & Atkinson, S. F.  
659,361.—RELEASING MECHANISM—Burr, Stut & Atkinson, S. F.  
659,362.—STEP LADDER—J. S. Butler, Palo Alto, Cal.  
659,287.—BENCH PLANE—E. O. Carvin, Valley Springs, Cal.  
659,581.—MOTOR VEHICLE—A. M. Co-burn, Daunt, Cal.  
659,437.—PIPE MAKING APPARATUS—A. S. Dixon, Los Angeles, Cal.  
659,366.—BATH CABINET—Elliott & Idlor, S. F.  
659,298.—COOLER—M. Gratz, Los Angeles, Cal.  
659,473.—SCRAPER—J. H. Gregory, Ione, Cal.  
659,393.—TOBACCO PIPE—W. R. Hale, Gualala, Cal.  
659,396.—INDICATOR—J. S. Hill, Los Angeles, Cal.  
659,537.—SEWING MACHINE—F. T. Leilich, S. F.  
659,608.—WEED CUTTER—McCorkell & McEachern, Helix, Or.  
659,407.—CALCULATOR—C. T. Meredith, San Diego, Cal.  
659,408.—TRACK CLEANER—Morck, Krickau & Boehle, Oakland, Cal.  
659,376.—DRAG SAW—B. F. Nedrow, Anacortes, Wash.  
659,593.—TOOTH BRUSH—C. W. Richards, S. F.  
659,350.—METAL PARTITIONS—T. F. Osborn, Oakland, Cal.  
659,380.—SOLDERING MACHINE—W. H. Smyth, Berkeley, Cal.  
659,381.—SOLDERING MACHINE—W. H. Smyth, Berkeley, Cal.  
659,611.—CHECK HOOK—F. G. Snook, Sacramento, Cal.  
659,264.—AIR SHIP—C. Stanley, S. F.  
659,562.—DINNER PAIL—Mary Welke, Oakland, Cal.  
659,355.—TROLLEY GUARD—H. S. Williams, Pasadena, Cal.  
33,333.—DESIGN—L. Valentine, Claquato, Wash.  
33,332.—DESIGN—P. J. Nelson, Ben Lomond, Cal.

**WANTED.**—Registered Shorthorn Bull from A1 DAIRY STOCK.

Dams must show good butter record. FRINK BROS., El Casco, Riverside Co., Cal.

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anybody can run it, because it

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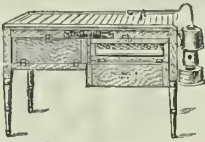
very successful it has been on

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## Breeders' Directory.

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**THOS. WAITE**, Perkins, Cal. Breeder Reg. Berkshires. Sweepstakes State Fair and Tanforan, 1900.

**P. H. MURPHY**, Perkins, Sac. Co., Cal. Breeder of Shorthorn Cattle and Poland-China Hogs.

**J. P. ASHLEY**, Linden, San Joaquin Co., Cal. Breeds Berkshire, Poland-China and Essex Hogs.

## SHEEP AND GOATS.

**C. P. BAILEY**, San Jose, Cal. Angora Goats and Persian Fat-tailed Sheep. Catalogue free.

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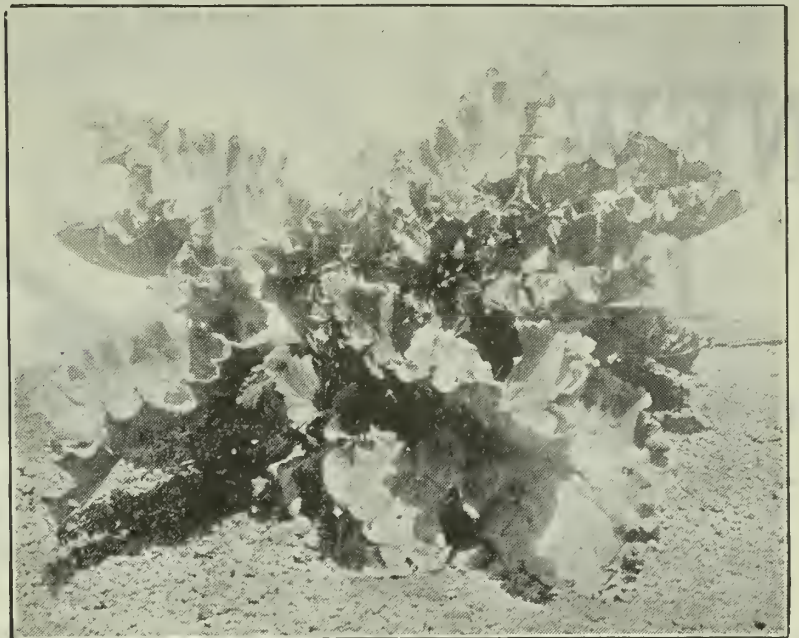
**HENTEETH**, Blood Meal, Bone, Chick Feed; circular free, or 4 samples, prices, etc., mailed for 5c postage. Poultry, Pigeon and Belgian Hare Supplies, Incubators, etc. Croley, 506 Sac'to St., S. F.

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WON BY USER OF THE **IMPROVED U. S. SEPARATOR.**

WEST BRANCH, IA., Sept. 23, 1900.  
It is a grand success. Would not do without it.  
I purchased a No. 6 Improved U. S. Separator a year ago and can say I milk on an average 8 cows, and have made enough over and above what I made with the same number of cows when using the gravity system to pay for my separating outfit in one year.  
I exhibited butter made from U. S. Separator cream at the State Fair this year and received Highest Award, including Sweepstakes, in the Dairy Class and premiums amounting to \$56.  
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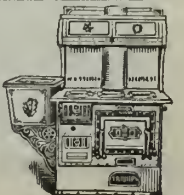
is still in the lead. Reports from the THREE GREAT FAIRS of the Pacific coast show that after meeting the best herds in California, Oregon and Washington, we can rightfully claim to have the **Champion** Herd of the coast. Look at the record: California State Fair, 15 ribbons; Oregon State Fair, 18 ribbons; San Francisco and San Mateo Fair, 20 ribbons, making a total of 53 ribbons. Our large sales to visitors to the fairs show what they thought of the stock, and we have very few salable pigs left. If you are in need of stock, write us and we will describe what we have.

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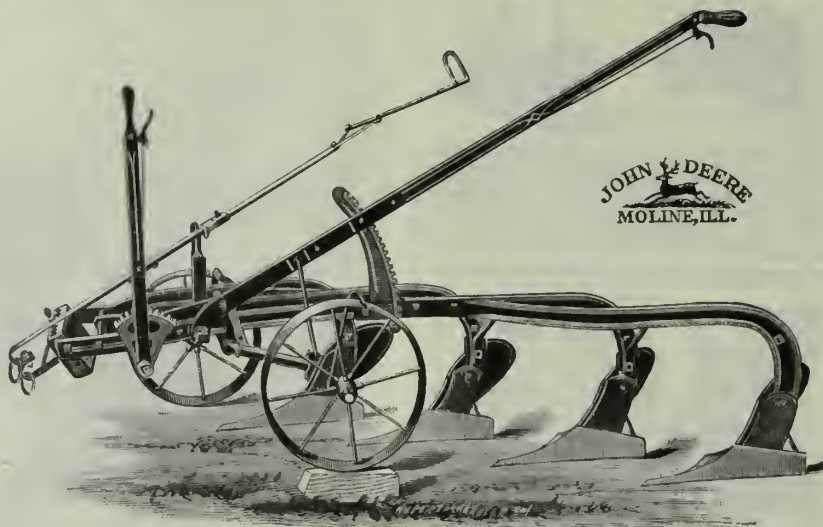






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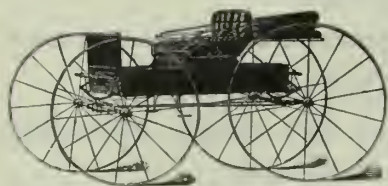


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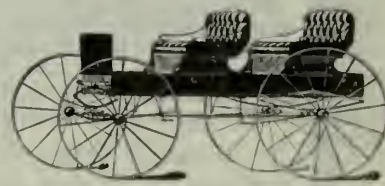
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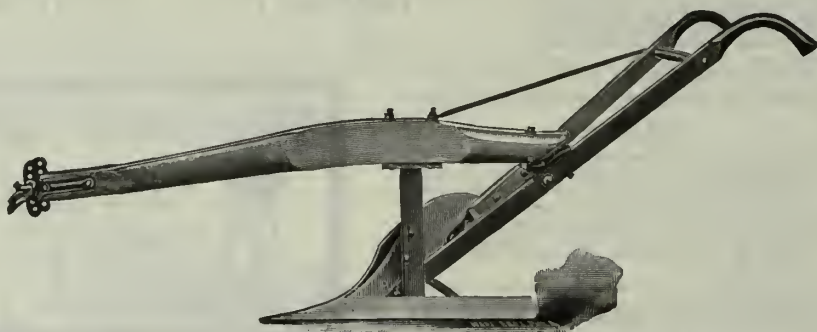
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NEW IMPLEMENTS  
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HARVESTING MACHINERY

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SINGLE  
ROAD  
SULKY  
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# PLOWS!

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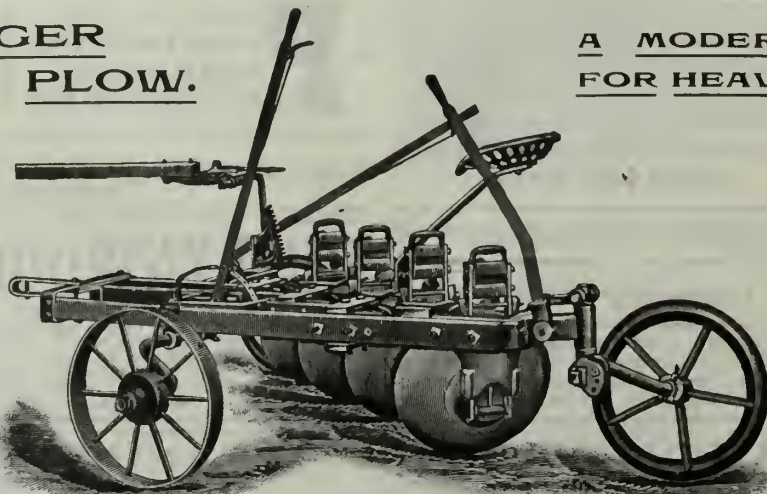
A MODERN PLOW  
FOR HEAVY WORK.

"NO SCOUR NO PLOW."

TIGER PLOWS ALWAYS SCOUR.

DISCS ARE SELF-SHARPENING.

HARDER THE SOIL BETTER THE WORK.



CUTS, PULVERIZES AND  
COVERS PERFECTLY ALWAYS.

BEAUTIFUL SEED BED.

SAVES ONE HARROWING.

**BAKER & HAMILTON,**  
SALES AGENTS,



# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 18.

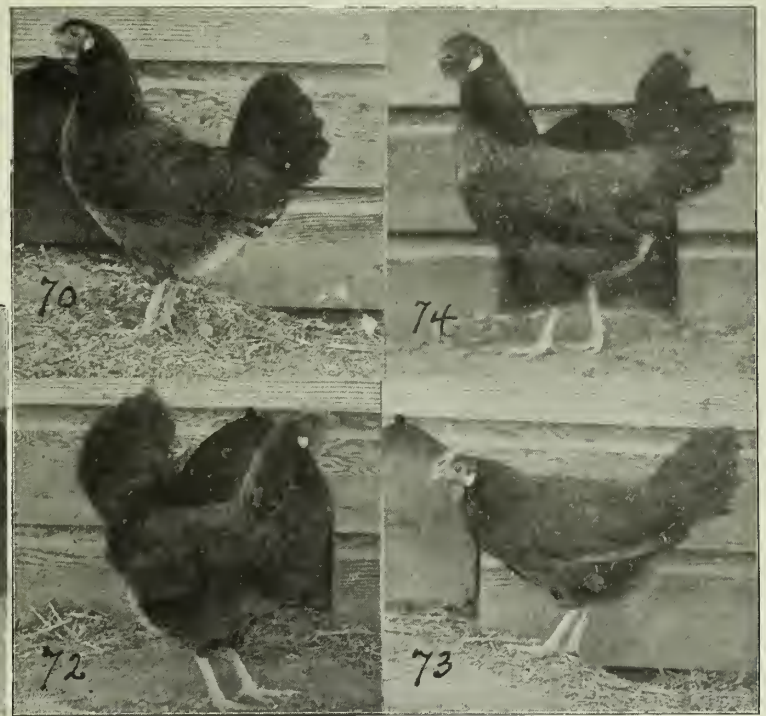
SAN FRANCISCO, SATURDAY, NOVEMBER 3, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

### Poultry Experiments.

In the PACIFIC RURAL PRESS of August 11th we gave an outline of the results of a three-year set of experiments conducted by Prof. James Dryden of the Utah Experiment Station to determine a number of things which it is very desirable to know in poultry care and feeding. We credited the Utah station with very creditable work in this line, and readers can refresh their memories of it by turning back in their files to the issue cited above. In addition to the written facts, there are some pictorial presentations by Prof. Dryden which we have secured for the entertainment and instruction of our readers. One of the most interesting is covered by the first group on this page. There are shown five Brown Leghorn hens which seem to be of average character. Does the reader see in them any indication of very different laying power? If so, before reading further, let him decide which is the best and the worst, and how great the difference. We own that, being confident of the possession of something of an eye for a hen, we were very much surprised to find that one of these hens is a hopeless bankrupt, or doing all she can to bring her owner into such condition. Watch the numbers and see what these hens did in a year from November 1st to the end of the following October: No. 70, 56 eggs, value 58 cents; cost of food per dozen eggs, 13.8 cents; No. 71, 202 eggs, value \$2.30; cost of food per dozen eggs, 3.8 cents; No. 72, 201 eggs, value \$2.27; cost of food per dozen eggs, 3.9

says that, so far as could be judged from the appearance or form of the pullets, no one could tell which were the capables and which the incapables. A photograph of each pullet was taken in summer just about the time the birds were beginning to moult. The conclusion of the matter must be that with hens,



Brown Leghorns Tested for Years' Work at the Utah Experiment Station.

as with cows, there is a very wide variation in individual worth, and the grower ought to know which are the good ones and keep only those either for eggs or for propagation of their kind.

Another group of the pictures shows two cockerels, one of which was caponized. This test of the value of caponizing gave no indication of increased growth from the operation of caponizing; but the appearance of the dressed bird and the quality of the meat showed a decided advantage from the operation. One striking difference in the appearance of the two birds, as shown by the photograph, was the absence of comb and wattle development in the capon. Another noteworthy characteristic of the capon was that he

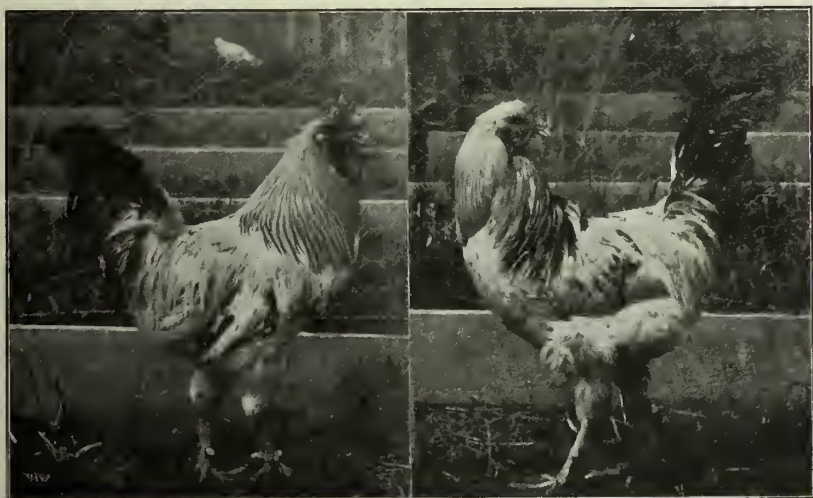
was much more docile than the cockerel and consequently showed little or no disposition to fight.

The lower line of pictures contrasts the White Wyandottes and Plymouth

Rocks. These breeds held together quite closely in Prof. Dryden's experiments. In one place he says of them:

"The pen of Wyandottes averaged 138 eggs per fowl. Pen 17 of Plymouth Rocks averaged 147 and pen 18 averaged 130 eggs. These three pens were fed alike except as to quantity. As between the Wyandottes and Plymouth Rocks, therefore, the only breed comparison that can be fairly made is of pens 16, 17 and 18. As to the number of eggs laid by each, the two pens of Plymouth Rocks averaged about the same as the pen of Wyandottes. The pen of Wyandottes, however, owing to a smaller consumption of food, shows a better record as to food cost per dozen and per cent profit on food than either of the two pens of Plymouth Rocks."

THE Arlington Heights Fruit Co. received a second award for oranges at the Paris Exposition, Sept. 26. The total number of awards of the several grades to American exhibitors in the temporary competitions in pomology to Oct. 1, 1900, is as follows: First prizes 58, second prizes 44, third prizes 14, honorable mention 10, total 126.



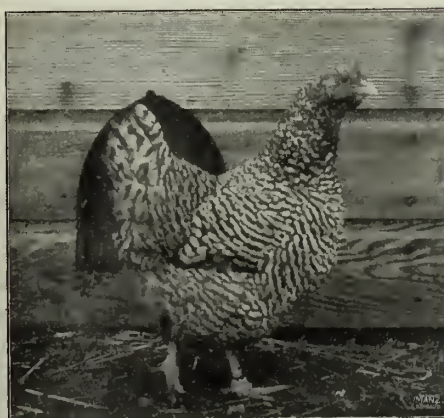
Cockerel.

Capon.

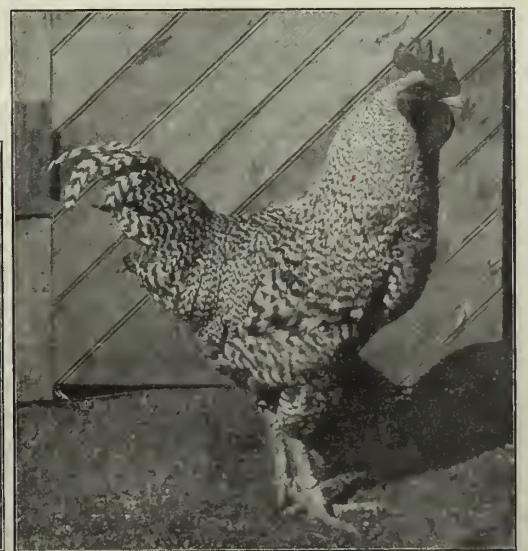
cents; No. 73, 207 eggs, value \$2.40; cost of food per dozen eggs, 3.2 cents; No. 74, 117 eggs, value \$1.18; cost of food per dozen eggs, 6.7 cents. Prof. Dryden



Pen of White Wyandottes.



Barred Plymouth Rocks—Pullet and Cockerel.





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Advertising rates made known on application.

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E. J. WICKSON..... Horticultural Editor.

San Francisco, November 3, 1900.

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## The Week.

The State is rapidly donning her garb of winter verdure in response to the gentle showers which have widely prevailed. Work in preparation for seeding is being pushed in all except the drier parts, and conditions seem to favor a very large acreage in crop the coming year. Orchard and vineyard planting is being also largely figured on, and there promises to be quite a free planting of some fruits which seem exceptionally promising. Dairy improvement and extension are also claiming much attention. As soon as election is over and the great excuse for procrastination is ruled out, we expect active times and a brisk trade in all things entering into farm supplies, for the outlook and the opportunity for full production were never more clear than they are now.

Wheat has brightened up and is to-day in much better condition than a week ago. The visible supply is somewhat less than expected and there is a report that Argentine will have less than calculated. Spot wheat is stiff, but not particularly higher, because buying is light. A little activity among buyers just now would help things up notably. Barley is slow, but steady and unchanged, being strongly held. Oats are also firm, being held in anticipation of government contracts. Corn is a little lower, owing to arrival of some home-grown small yellow. Hay is steady and receipts light. Bran is easier and rolled barley sympathizes. Beef is looking up and mutton is firm, but unchanged. Hogs are in steady adequate supply, but receipts are readily taken care of. Butter is down to bed-rock prices almost to the price of packed, which is being vigorously pushed into use whenever possible. Cheese is in healthy shape. Eggs are the same as a week ago, being held very high, while the best Eastern are being worked off as fresh ranch eggs at an immense profit to dealers. Poultry is quiet except for broilers and extra large old birds. Ordinary stock is knocked out by the Eastern receipts. Potatoes are firm for the best and weak for common, while choice meet a good demand. Onions are in brisk demand partly on speculative account. Beans are holding out well; they are not so active, but are still strong. Dried fruits are doing little except raisins, which are bringing good figures. Outside prunes are going at irregular figures. Peaches, pears and apples are dull. Walnuts are firm at fixed rates and moving off well. All kinds of oranges—old, intermediate and new—are now in and it takes a sharp to be sure about what they are. Not many seem to be wanted. There is a great crush of poor lemons and choice are hard to get, and the same thing exactly is true of apples. Some Oregon Spitz-

enbergs are arriving. Hops are quiet and steady. There is little doing here in wool, though the Eastern markets are more active.

On another page of this issue we have the summary of the census for 1900 concerning the population of California. Considering the outside attractions of the last few years, which have drawn Californians to different parts of the coast from Mexico to Alaska, and to the Pacific islands, and the drouthy condition of the lower part of the State for the last three years, it is very gratifying that our population for the decade should be nearly 23%. There is every reason to expect that the next decade will show a much greater increase. Just as we go to press there comes the telegraphic outline of the summary for the United States, showing a percentage increase of 21—a little less than California's increase. The total population of the United States for 1900 is 76,295,220, of which 74,627,907 are contained in the forty-five States. There is a total of 134,158 Indians not taxed. The total population in 1890 was 63,069,756. There has been, then, a gain in population of 13,225,464 during the last ten years, or nearly 21%.

We have just received the fourth of a series of pamphlets in which are catalogued the acquisitions of the United States from the outside world in the form of seeds and plants of economic importance for local trial. This introduction is accomplished through the section of seed and plant introduction of the Department of Agriculture, and enough of the results of this work are already discernible to warrant the conclusion that no single undertaking of the Department is of greater moment and direct value to the agricultural interests of the country. It is clear now that the Department in all the years of the past has been merely trifling with its ability to place the American farmer in quick possession of the very best material and agencies which the whole world affords. The insight and energy of the present administration of the Department has not only accomplished as much in a couple of years as the old method would in a quarter of a century, but the policy of personal expert exploration has brought to light and secured many things which might otherwise have been long deferred or entirely overlooked. An achievement of overshadowing importance to California is the successful introduction and establishment of the fig insect of Smyrna, and it illustrates the wisdom of the present policy and method of the Department. For twenty years individuals have attempted this many times without success. The experts of the Department succeeded immediately and the commercial fig interest which has been so long a sort of horticultural ignis fatuus is now an accomplished fact, and the industry which fruit growers will be quick to establish upon it will soon be yielding a product worth a million dollars annually. The securing of date plants true to name is another notable accomplishment, which will be slower in reaching results because of the nature of the plant and its limited multiplication, but the next generation will count it one of the greatest agencies for the development of the warmer parts of the arid region. The introduction of the best white wheats from other wheat-growing countries is one of the best things which has recently been accomplished for California agriculture. We stand in need of new varieties of this class to replace the old, which are running out, and we could only have secured them singly and at long intervals had it not been for the broad and systematic collections of the section. These are only a few facts of the many which could be cited, but any one of these will return more value to California than the whole work of the section has cost since its establishment.

In a recent allusion to the lamented death of Col. J. B. Armstrong of Cloverdale we alluded to his intention to establish and endow a redwood forest in Sonoma county for the public benefit as a purpose which the illness of the last few years of his life may have interfered with. We now see in the papers a statement that Col. Armstrong made a trust deed some time before his death, in which his daughters, Miss Kate Armstrong and Miss Lizzie Armstrong, joined, conveying to a board of trustees for the benefit of the public his "Big Bottom" ranch at Guerneville, with the great grove of giant underwoods, comprising in

all nearly 1000 acres of valuable lands. Miss Kate Armstrong passed away some time before her father's death, but Miss Lizzie Armstrong survives, and she inherits in a marked degree the talents and disposition of her father and has had largely of late years the direction of his business affairs. If it is feasible to carry out his plans with reference to the dedication of this splendid forest tract to public uses we have full confidence that Miss Armstrong can administer the trust with signal success and the "Armstrong Forest" be known while California endures as the monument of a patriot and friend of learning—for undoubtedly the forest would align itself with the other facilities of the State for the promotion of forestry science and education. Those who know the tract say it contains probably the finest redwoods in the State, and its accessibility, being but a short distance from the railway at Guerneville, conspicuously befits it for a public recourse for those of scholarly intent.

Statistics of the coming orange crops in this State and in Florida are interesting. In Florida the railway men are figuring on a crop of 1,000,000 boxes, which is said to be the largest since the great freeze in 1895. The crop of 1894 was 6,000,000 boxes, so the State expects this year to attain one-sixth of her old-time bumper crop. California has ceased to count her crop by boxes, and to compare Florida's crop with ours it may be estimated that it would make, say, 2750 carloads. The Los Angeles Herald says that the California shipments for the crop year which closes this week will be about 17,800 carloads, a gain of about 78% over the production of the preceding year and about 25% over the crop of two years ago. It is now very generally conceded that there will be a large increase in production during the coming year, if everything moves well from this time on. The coming crop is now variously estimated at from 23,000 to 25,000 carloads of oranges and lemons, with a growing disposition to accept the latter figure. This provides for an increase from 30% to 40%, which looks large, but, as a matter of fact, it is a less percentage of increase than has been the rule for several years.

It is said that imitation is the sincerest flattery, but flattery is not always acceptable to the flattered one. Fred S. Gifford of Watsonville tells the New York Fruit Trade Journal what Eastern imitators are doing with California styles of packages, etc. California packers who have gained an excellent reputation in Eastern markets for their pack of apples should now look out for imitations of their brands and labels. The box package is coming into use in Eastern apple districts, and the imitation of California labels and brands is apt to follow. Each season Eastern peaches are repacked in California boxes and sold as fruit from this State. Eastern canned fruit and vegetables are put on the market with California labels. Our apple packers are apt to hear within a year of imitations of their brands of fruit, in box packages, being offered at lower prices than they can quote. Any such scheme can only be temporarily successful, for California fruit cannot be confused with Eastern by any one who knows anything about fruit; and yet the evils do a lot of harm while they last and should be prevented.

The Prune Association is proceeding energetically with its work. An effort is now in progress to ascertain just how many prunes are in the hands of growers. At a meeting held in San Jose last week the directors refused to make a reduction in adopted rates, the entire Board being a unit on the proposition to stand firmly by the prices set. The shrinkage in the crop and all subsequent events confirm the Association in the prices first set. Another dividend has been declared. It is estimated that this will distribute \$600,000 to the growers, in addition to the \$112,000 already paid out.

THERE are fifty-seven counties in California, some of them as large as some Eastern States. From the county of Fresno alone, in one week last month were sent the names of sixty-one new subscribers to this paper. This is illustrative of what the PACIFIC RURAL PRESS is always doing in the way of keeping up its lists of subscribers, and is also illustrative of the value of its advertising columns to those who realize that an advertisement in a paper that reaches the people is a good investment.



QUERIES AND REPLIES.

The Mammoth Blackberry.

To THE EDITOR:—I enclose clipping from one of our local papers about the Mammoth blackberry. Are the statements justified by experience? We look to the PACIFIC RURAL PRESS for the truth in such matters.—READER, Los Angeles.

To THE EDITOR:—Are the statements about the Mammoth blackberry in the newspaper cutting which I send correct? What do growers in the upper part of the State conclude about it?—SUBSCRIBER, Orange county.

We have already stated what we know of this fruit; but, as it may be taken up by those who indulge in horticultural fairy stories, it will be well to repeat. The first public information about the variety was given in the PACIFIC RURAL PRESS of Sept. 4, 1897, in the form of a life-size engraving of the fruit and the facts of its origin as furnished by its originator, Judge J. H. Logan of Santa Cruz. It was there shown that the Mammoth was a cross between the common wild blackberry of California and the Texan variety, which has become known in this State as Crandall's Early. The offspring of these two medium-sized berries was a very large one, fruits 2½ inches in length being frequently found by Judge Logan, and from this fact came the name it bears. The canes of the Mammoth are very peculiar, being very large and thickly covered with small, short spines. The canes start early in March, grow thick and stout until about 5 feet high. They then take on a running habit and grow from 25 to 30 feet in a season. Late in the fall the tips or stolons seek the ground and take root. Unfortunately for the propagation of this plant, the stolon method is the only one known for its increase. It has no adventitious root buds, and consequently can not be increased by root cuttings. This, however, has its advantages, as every one knows what a nuisance the common blackberry is by spreading from its roots. The Mammoth is not an evergreen like its Texas parent, although it does not entirely lose its leaves in winter. It begins to grow and flower very early in spring and ripens its fruit in Santa Cruz the last of May, some weeks earlier than the Lawton. The fruit is generally large, but of course not all as large as the measure given above. In flavor the fruit is more acid than the Lawton; but, when perfectly ripe, is sweet and of superior flavor. When cooked or canned, the flavor is identical with the wild berry of California.

Such are the descriptive points given by Judge Logan. The stock went at once into the exclusive control of James Waters of Watsonville, and he has been engaged in propagation to secure plants enough for a public offering, which we have expected he would make this year. Whatever experience has been secured in the growth and fruiting of the variety is known to him. So far as we know, it has never come into the hands of other growers, and consequently they can have no conclusions as to its character. All this will have to be demonstrated after the plant is given a wide distribution.

Sick Palm Leaves.

To THE EDITOR:—I enclose a sample of the trouble I have with my palm. Will you kindly tell me the cause and remedy?—PALMIST, San Francisco.

The injury to parts of the leaf does not seem to be due to insect or fungus, for no signs of them appear. The death of parts of the tissue of the leaf is sometimes due to sunburn or scald from too hot sunshine, while the leaf is still wet, but is also due to lack of nutrition or defective root action. If the palm is in the open ground it could be invigorated by using manure on the surface to be leached down by the rain. If the palm is in a pot it should be repotted in fresh soil, which will probably give the new leaves a stronger growth. Nothing can be done to restore the old sick leaves. They must be removed.

Early Sowing for Hay.

To THE EDITOR:—On my ranch on the east side of the Coast Range, in San Luis Obispo county, the rains have penetrated for several inches. We have a large piece of summer-fallow. Is it wise to seed it now for hay and take the chances of more rain?—FARMER, San Francisco.

We are not a prophet nor the son of one, but we should take the chances of seeding as soon as the

moisture penetrated 12 inches in the summer-fallow, unless the piece lay open to flood or freezing, or subject to some other condition which makes early sowing inadvisable. If it is merely a question of losing the seed through drouth, as in the recent past, we should take that chance; for when moisture has gone down a foot there will be enough to give the plant such a start that it can hold on through a long dry spell, and it will be in just good condition to take advantage of every drop of rain that falls. We would not sow now on land not summer-fallowed, unless we had surety of more water; but sowing on summer-fallow is a somewhat different proposition, because it retains more of the moisture already fallen, and early-sown grain upon it will make hay, even if every piece of newly-plowed land fails to do so. Go ahead with the sowing, unless you fear the plant may freeze or drown if there should be a heavy winter.

Sugar Prune on Peach.

To THE EDITOR:—In the spring I intend to plant out several acres to peach seedlings, to be worked over to Sugar prunes. Will the seedlings be firmly established enough to make it safe for early spring budding—early enough to make a growth before winter—or would it be better to wait until the following year and graft them? On peach stock, how early can one bud? Please tell me how to preserve bud sticks saved from pruning time for the early budding.—ORCHARDIST, Sacramento.

We suppose you mean to plant seedlings in orchard and bud them in place. We would not do it. We would bud in nursery every time, but that is not your question. There is now, unfortunately, some question of how the Sugar prune will do on peach stock. We have had failures reported, but are not sure how far such trouble prevails. We would like to hear from propagators on the point. It needs looking into. You can bud on good, vigorous seedlings in June and get growth on the bud the same summer, and if it is on good, deep soil you will probably get a good growth. The buds cannot be saved over from pruning. They must be from the new growth made in the spring, and by pinching the ends of the shoots you will get the buds below to mature enough to bud in June. You can bud just as early as you can get these mature buds.

If the myrobolan root does well in your soil, you can get myrobolan seedlings and graft at the crown with scions you take off at this winter's pruning, and in that way get trees quickly. The peach does not graft as well as the plum, but it will go with a little extra care.

Sugar Prune on Peach.

To THE EDITOR:—I send you a lot of specimens showing Sugar prune budded on peach seedlings and on myrobolan. You will see that this prune does not unite with peach stock. In February, 1899, I bought of Mr. L. Burbank Climax plum and Sugar prune wood. I grafted part of the wood of the Sugar prune on plum and part on peach wood. I took the buds and budded on the peach seedlings, and when the buds were growing very fast the cultivator broke off all it touched. The balance of trees left by the cultivator overgrew the peach wood. Even then the bud did not unite well with the peach wood. On the myrobolan plum it unites well. It is a very strong grower, much more so than the Petite or even the Robe de Sergeant, which is itself a strong grower.—J. T. BOGUE, Marysville.

This is a matter of much importance and should be looked into carefully. We shall be glad to have the observation of all propagators. The samples sent by Mr. Bogue bear out his statements. Though the Sugar prune has grown strongly it parts readily from the stock and in fact shows a seam all around, along which the separation takes place when the strain is applied. This is also true of the older growth in which the prune has much overgrown the stock. These specimens can be seen at this office by all who are interested. There is clearly a lack of affinity between the Sugar prune and the peach stock which Mr. Bogue used. Is this the fact with all peach stocks and with all ways of propagating? We shall be glad to have the question widely discussed and all experience bearing upon it brought to light for the common benefit.

A Sword Bean.

To THE EDITOR:—I send herewith a couple of string beans of unusual proportions grown by I. T. Halford in his garden in Porterville. He has a bush (not a running vine) with about fifty on it. These weighed, when picked, 9½ ounces, and measured 14 inches.

Are they good to eat and what do you think about them? The seed was brought from Missouri some time ago by Mr. Halford. It appears his mother in Missouri brought some seed and one of these big beans came up. Kindly give us some information about this.—LUMLEY BROS., Porterville.

Prof. Hilgard recognizes the bean as the "sword bean" with which he was acquainted at Vicksburg nearly forty years ago. It is a variety of phaseolus. It was reported to have come into the Southern States from South America by way of New Orleans, and was used to some extent as food. The specimens sent from Porterville are sword-shaped and about 14 inches long. Prof. Hilgard says he has seen the pod twice that length. The bean is a handsome, large, smooth, white bean. The variety is worth growing for trial as stock food, and an experiment in cutting it up with corn for the silo is also worth making.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending October 29, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

COAST AND BAY SECTIONS.

Showers have fallen in the northern Coast counties and in portions of the Bay section, with light sprinkles of rain in some of the southern counties. In sections where the soil has been sufficiently moistened by the autumn rains, farmers are engaged in plowing and seeding; some plowing is also being done in other sections, but most farmers are waiting for heavy rain. Should conditions continue favorable, a large acreage of grain will be sown. Potato digging and apple picking are progressing; in Humboldt county the apple crop will be much above the average. Green feed is plentiful. Volunteer grain is doing well. Light frosts occurred in San Luis Obispo county on the 23d and 27th, also in Sonoma county on the 27th, and in Monterey county on the 25th.

SAN JOAQUIN VALLEY.

The weather has been generally clear and cold during the greater part of the week. Light rain fell in the northern portion of the valley Saturday night and Sunday, and was beneficial to pasturage and early sown grain. Light frosts occurred at Angolia, Hanford and Visalia, but no damage has been reported. The raisin crop is nearly all cured and under shelter. The second crop of grapes will be put through the dryers or sent to the wineries. Olives are ripening. Packing houses are rapidly filling up with the season's dried fruits. The first carload of Porterville oranges was shipped East on the 26th; a heavy crop being gathered in that locality. Plowing and seeding continue in sections where the soil is in good condition, and a large acreage of grain will probably be sown. Green feed is abundant. Alfalfa is thrifty.

SACRAMENTO VALLEY.

The weather has continued favorable for plowing and seeding, which has progressed rapidly. There were light showers in many sections on Saturday, followed by fair weather and northerly winds. In the vicinity of Red Bluff there was a light frost this (Monday) morning; also in Yolo county on the 25th. Farmers are taking advantage of the present favorable conditions for early fall work, and are preparing for an unusually large acreage. Early sown grain is up and vigorous, and in some places grass is fully 6 inches high. Grape picking is completed. Oranges and olives continue thrifty, and large crops are expected.

SOUTHERN CALIFORNIA.

Cooler weather has prevailed during the week, with fogs and considerable cloudiness, but no rain. Nearly all the raisins are now in the sweat boxes. In San Diego county apples are now plentiful and of better quality than for several years; pears are also of excellent quality. Oranges continue thrifty; but would be greatly benefited by rain. Canneries are closing up the season's work. Celery is ready for market. Walnut picking is still in progress. Plowing has commenced in some sections.

EUREKA SUMMARY.—Heavy rains during the past week retarded farm work. Grass continues making good growth. Apples are about half gathered; they are free from codlin moth, and of exceptional quality.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Oct. 31, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week. | Total Seasonal Rainfall to Date. | Total Seasonal Rainfall to Same Date Last Year. | Average Seasonal Rainfall to Date. | Minimum Temperature for the Week. | Maximum Temperature for the Week. |
|----------------------|------------------------------|----------------------------------|-------------------------------------------------|------------------------------------|-----------------------------------|-----------------------------------|
| Eureka.....          | 1.00                         | 5.79                             | 5.58                                            | 3.72                               | 44                                | 60                                |
| Red Bluff.....       | .14                          | 3.15                             | 3.04                                            | 2.04                               | 42                                | 70                                |
| San Francisco.....   | .60                          | 1.48                             | 4.48                                            | 1.13                               | 38                                | 70                                |
| San Francisco.....   | .21                          | 1.64                             | 3.92                                            | 1.57                               | 48                                | 68                                |
| Fresno.....          | .04                          | .46                              | 2.01                                            | .93                                | 36                                | 74                                |
| Independence.....    | .00                          | .37                              | .37                                             | 1.01                               | 42                                | 68                                |
| San Luis Obispo..... | .00                          | 1.99                             | 3.92                                            | 1.89                               | 48                                | 78                                |
| Los Angeles.....     | .00                          | 1.60                             | 1.26                                            | .46                                | 46                                | 74                                |
| San Diego.....       | .00                          | .28                              | .42                                             | .49                                | 50                                | 70                                |
| Yuma.....            | .00                          | .02                              | .08                                             | .97                                | 50                                | 88                                |



## HORTICULTURE.

### Preventing Frost Injuries by Whitening.

We have alluded several times to the possibility of preventing the too early activity of deciduous trees by using a whitewash spray which prevented the absorption of sun heat by the branches while the trees are not in leaf. This is demonstrated by experiments by Prof. J. C. Whitten of the Missouri Experiment Station, and it will be interesting to those who desire to retard the blooming of almonds, apricots, peaches, etc., to try the effect of whitening the bark. For this reason we give a fuller account of the matter than we have hitherto published, that our readers may think about and plan for trial of it this winter. The account is by Prof. Whitten and was prepared for the American Pomological Society.

**COLOR AND GROWTH.**—The relation of color to the growth of the plant has been given some attention by students of vegetable physiology. It has been observed that many species of plants take on a reddish or purplish tinge upon the approach of cold weather, and that their purple coloring matter becomes more and more abundant as the cold becomes greater. The fact has been recorded by Kerner that many species of Alpine plants are green when grown at a low altitude, where they receive less warmth. It has further been shown that if some of these green-colored plants are removed to a higher and colder locality they have the power of quickly taking on the dark purple color customary to the species in cold places, and that, conversely, if the purple specimens are removed from the colder places to the warm valleys below they soon lose their dark coloring matter and become green, like adjacent plants of the same species. In many cases plants that bear white flowers during warm weather produce flowers of a purplish tinge upon the approach of autumn. These and numerous similar phenomena led to the conclusion that this purple coloring matter in plants served the purpose of absorbing heat, thus facilitating growth at low temperatures, and Kny and others have, by direct experiment, proven this supposition to be true.

**PEACH BUDS IN MISSOURI.**—While these facts have been established by the vegetable physiologist, the horticulturist seems not to have given the matter very much attention in studying the management of cultivated plants. During the past few years the writer has conducted some experiments at the Missouri State University, which indicate that their color bears a very important relation to the winter-killing of peach buds, and to possible methods of its prevention.

It is a well-known fact that while flower buds of the peach are sometimes able to endure a temperature of 20° or more below zero without injury, they are at other times killed even at temperatures much higher than this, and have been known to be destroyed at temperatures above zero. During the past winter flower buds of the peach were killed in some orchards in Missouri during December, when the mercury registered 12° below zero. On the other hand, some peach trees in the same State endured a temperature of 26° below zero during February without injury to their buds, and they are now carrying a good crop of fruit.

**HARDINESS OF THE BUDS.**—Observations during the past four or five winters convince me that the condition of the buds has much to do with their ability to safely endure cold. Perfect maturity of the buds in autumn seems to favor their safe wintering; while imperfect maturity of the tissues, from lack of moisture, or, on the other hand, from excessive and prolonged growth during a warm, moist autumn, seems to oppose their endurance of severe cold. If peach trees prematurely approach a dormant condition during a dry time in late summer, and are subsequently stimulated into autumn growth by warm rains, as is sometimes indicated by the blossoming of the trees in autumn, the remaining buds are usually very liable to injury in winter.

Again, peach buds often grow perceptibly during mild weather in winter. We are in the habit of thinking of peach buds as being dormant during winter. As a matter of fact, in this climate, they grow perceptibly during the winter months. The most frequent cause of winter killing in this section is severe freezing of the buds after they have been rendered liable to injury by making too much growth on warm winter days.

**WHY THEY GROW.**—The swelling or growth of peach buds in winter is due to the heat they receive, is independent of root action, and may take place when the roots are frozen. Considering the fact that the purple coloring matter of plants is admirably adapted to absorbing heat, the idea suggested itself that if the twigs were whitened to reflect rather than absorb the heat, during bright sunlight, there would be less danger of swelling of the buds on warm winter days, and consequently less danger of subsequent winter killing.

During the winter of 1895-6 peach trees of several varieties were whitened by spraying with lime whitewash. In order to thoroughly enrust the twigs with lime, two sprayings were necessary, just as two

coats of paint are necessary to cover wood. Whenever this was washed off to any extent another coat was applied.

**RESULTS.**—The winter was marked by changeable temperatures. During February whitened and unwhitened buds were examined weekly under the microscope. Sections of whitened buds revealed the fact that they were not growing perceptibly, while sections of unwhitened buds showed that they were swelling more or less every week. At the time of blossoming it was found that the pistils had been killed in 80% of the unwhitened buds, while only 20% of the whitened buds had been destroyed. Warm weather came on very suddenly and most fruit trees blossomed at about the same time. There was a difference of about one day in the time of blossoming of whitened and unwhitened trees. The whitened trees remained in bloom longer than those that were not whitened, and set more fruit.

During 1896-7 the same and also additional trees were whitened. The same marked effect was noted in retarding the swelling of the whitened buds during warm days in winter. The winter was mild and there were very few peach buds killed.

The whitened trees blossomed from two to six days later than those which were not whitened.

**OTHER EXPERIMENTS.**—During the winter 1898-99 twigs were cut from various varieties of peach and forced into growth, from time to time, in vases of water in the greenhouses. One-half the twigs of each variety were whitened and one-half were left natural. In all cases the buds of the unwhitened twigs began to swell and grow perceptibly before the whitened ones did, and a similar difference was noticed in their time of blossoming. There was a much greater difference between the time of blossoming of whitened and unwhitened twigs taken early in the winter than between those taken late in the winter. There was also a greater difference in the number of days between their blossoming in a cool house than when kept in a warm house.

**DETECTING HEAT.**—In order to measure the difference in temperature between whitened buds, some very slender thermometers were made and tested for accuracy, for measuring the temperature of the twigs. Twigs of the past summer's growth and bearing fruit buds were cut off at points where their diameter was uniform and tunneled for about 4 inches of their length. The thermometers were inserted in these tunnels and the twigs were tied so they would stand vertically, in order to receive the sun's rays at the same angle. One of these twigs was whitened and the other left natural. It was found that during stormy weather the natural twig registered a higher temperature than the whitened one.

During very bright sunlight in midday the natural twigs were 15° warmer than the whitened twigs. The whitened twigs were nearly of the same temperature as the atmosphere. When the sun came out suddenly bright, however, the whitened twig did not warm up so rapidly as did the atmosphere. The difference of 15° in temperature explains why natural twigs do not swell enough to endanger themselves to subsequent injury from cold.

Comparison showed that naturally light colored twigs do not absorb so much heat as the dark purple twigs. Varieties of the Snow type do not reach so high a temperature by several degrees as do varieties that have darker twigs.

**WILL IT PAY?**—Whether or not whitening will prove commercially profitable remains for the practical grower to work out. Its profitability will no doubt depend largely upon climatic conditions. In districts where there is an intensely bright winter sunlight it will probably have greater value than in districts where the winters are more cloudy. Where winter rains are abundant they may too frequently wash off the lime, rendering frequent application expensive. It is not improbable, however, that a wash may be discovered that will stick more effectively, rendering repeated application unnecessary.

The fact that light-green twigs absorb less heat than purple ones suggests the advisability of selecting for light twigs, in originating new varieties for those regions where whitening has a beneficial effect.

**THE BORDEAUX MIXTURE.**—M. S. Cook, Pennsylvania, said that in his experience with whitewashing he had found that, by the addition of a pound of pulverized glue, adding the slaked lime, the whitewash would stick very well.

H. J. Weber, Washington, D. C., remarked that possibly Prof. Whitten might cheapen his process by combining the whitewash spray with the fungicide, Bordeaux mixture, which of course is used for the monilia, or brown rot of the peach and other fruits. He inquired whether the addition of blue vitriol would make the whitewash too dark in color to answer the purpose intended.

Prof. Whitten replied that, in his experiments, blue vitriol had been tried in the wash and it had been found that it could be used in sufficient quantity to answer the purpose of the fungicide without detracting from its effect in reflecting the heat. The additional result had been shown that even the pure lime, without the blue vitriol, would almost entirely prevent leaf curl, but he was not able to say what would be its effect upon monilia (brown rot). The amount of blue vitriol used was about six pounds to fifty

gallons of whitewash. He added that it had been found that the purple coloring matter of the peach absorbed a great amount of heat, almost as much as would carbon, which is one of the best absorbents known. Twigs covered with carbon or lampblack registered a temperature only 2° higher than the natural purple twigs.

**CORROBORATION.**—Prof. John Craig, Iowa, said he was glad to corroborate Prof. Whitten's statements regarding the efficacy of the whitewashing as a preventive of leaf curl. His own experience had given results exactly in line with those stated by that gentleman.

W. T. Macoun, Ontario, spoke of experiments he had made at the Central Experimental Farm, Ottawa, Canada, at about latitude 45°, in order to see whether his experience would corroborate Prof. Whitten's. Not having peaches, he made the trial with cherries and plums and to a small extent with apples. He said the result corresponded with that attained by Prof. Whitten. The buds were retarded to a large degree until the warm weather came on. As soon as the atmosphere became warm, there was very little difference between them, and they blossomed at about the same time. He had noticed, however, in regard to the plum trees, that the whitewashing apparently killed a considerable number—probably one-third—of the buds.

### Why Are Prunes Small?

This was the main subject discussed at the last meeting of the San Jose Farmers' Club and an outline is given by the Mercury. E. A. Hayes thought it was a mistake on the part of the orchardists to irrigate late in the spring when the trees were growing. He believed that if irrigation was to be done it should be done in the winter months and in abundance. To irrigate late was to start the growth of the "feeders" or surface roots, and when the dry weather of summer came the trees and fruits would suffer if there was not a great abundance of moisture to supply. To supply moisture in the summer meant a heavy cost, a large evaporation and a "baked" soil. The speaker believed that the water should be applied in the winter or early spring months and that this should be followed by abundant and continual cultivation. In addition to all this he thought that trees in this valley were set too close together. Instead of being 20 feet apart they should be at least 25, and it would be better if they were 30 feet apart.

Prof. C. W. Childs recited the facts as he had them of El Dorado county. Formerly that county produced vast quantities of fruit of the largest size and rich flavor. Now many orchards are dead or worthless. He believed that this was due to summer irrigation and to the fact that water is no longer available to keep this up.

**IRRIGATION OR NOT.**—J. O. Hayes spoke of two orchards near Coyote. One of these orchards in the last two years under irrigation had not produced as good sized prunes as the other, which was not irrigated at all. In his opinion there were two reasons, one in a lack of cultivation and the other that the non-irrigated orchard had water nearer the surface. He somewhat doubted, however, the advisability of irrigation unless the water was applied in the winter or early spring and that thorough and continued cultivation followed. He was a personal witness of the fact, he said, that the non-irrigated orchard had not only produced the greatest tonnage, but the largest sizes. He believed it possible that, while the orchards were quite close together, the better paying orchard was nearer water. The soil is the same, but one orchard is closer to the laguna than the other. This may mean that the water is nearer the surface and that the roots of the trees reach it.

Prof. Childs told of a union of orchardists in his district on the Guadalupe, by which they dug a ditch and got their water from the creek. This cost just one-tenth as much as to pump the water, and in addition the moisture was of the same temperature as the air and practically the same as the soil. But above and beyond all this the water from the stream carried with it a fertilizer for the soil and left it there. The water from the wells did not carry this. He believed that there was ample water if conserved to irrigate all the lands of the valley.

S. Mitchell believed in irrigation, provided there was abundant cultivation to follow, and the character of the land and the sub-soil cut a figure, but if irrigation is employed it is certain cultivation must follow.

Dr. J. J. Shaner thought the whole matter was as yet in the dark. One orchard treated as another would return good results, while the other would be a failure. Soil cuts a big figure and he was inclined to believe that sub-irrigation by ditches would return better results than the flooding process. But with it all there entered the question of fertilization and cultivation. Some orchards seemed to require deep cultivation, while others needed shallow cultivation. This point might be due to the method employed from the time the trees were started. Orchards given too much water constantly would develop too much wood and not enough fruit. No tree, he continued, could bear good fruit and a good crop unless the "feeders" had plenty of moisture at the proper



time. If there was so much wood as to consume the moisture the fruit would be inferior.

**THOROUGH CULTIVATION.**—Joseph Cotta doubted the propriety of such general irrigation. He was a firm believer in thorough and deep cultivation and water, too, if it could be had. Water and shallow cultivation were ruinous, for this would bring the roots to the surface and they would die and the tree suffer in the summer.

W. P. Craigin spoke of experiments in irrigation alongside of orchards which were not irrigated. These tended to show that irrigation followed by good cultivation would give the best results, though there were conditions to be considered. In the main he believed that if irrigation was followed there should be fertilization. Moreover, the trees should be set out on the proper roots—soil considered—and then prunes, and not put out too close together. On light soils he thought almonds the best roots for prunes, and next apricot roots.

E. A. Hayes agreed that almonds were the best for sandy or gravelly soil and myrobalan roots for heavy soils. Peach roots, he said, would not furnish trees of such vitality.

W. P. Craigin advocated nitrate of soda as a stimulant for the trees and for producing sugar in the fruit. It would have an effect in thirty days. Muriate of potash would prove beneficial on some soils, but it should be applied before the winter rains.

Other gentlemen spoke in favor of the almond and apricot root for prunes on the lighter soils, with myrobalan roots for the heavy and wet soils.

W. Ball said he had been growing prunes for years and once thought he knew all about them. He now believed he knew nothing. Seemingly the same soils, the same irrigation and the same cultivation returned different results in different orchards. The temperature at a critical time, he believed, might have much to do with the crop. The three dry years had made a big difference in the depth of the moisture.

J. Ingalls agreed with this. He recited a case of prunes which were unusually large when green this season, and apricots unusually small. When dried the prunes were exceedingly inferior and the apricots unusually fine. They were on the same kind of soil and cultivated in the same way. He was not able to tell the cause, nor was any one present.

**CONSERVE THE WATER.**—Prof. Childs again urged the conservation of water in the winter. This carries fertilization, he said, while the deep well water did not. Mr. Bell added that the deep well water carried alkali and baked the ground, while the creek water did not do so.

On motion of Prof. Childs the secretary was requested to ask the growers of the county to report their experience in growing fruit, telling of irrigation, cultivation and results, and especially to tell whether irrigation, if used, was from wells or natural streams.

#### What Mr. Kamp Thinks About It.

**TO THE EDITOR:**—At a recent meeting of the Farmers' Club the reasons why prunes are small was liberally discussed. The questions of irrigation, non-irrigation, over-irrigation, cultivation (deep and shallow), pruning, thinning soils, variations therein, conditions, climate, etc., and kindred topics were exhaustively considered in a scholarly and intelligent manner, and still the prunes remained small.

The gentlemen taking part in these deliberations are practical horticulturists, engaged in the business of prune growing—students of the elements and accessories of success, of liberal means and untiring energy—and still prunes will average 90 to 100.

It was elicited during the meeting that W. H. Mills, a recent visitor at the Exposition at Paris, had brought word that, in the opinion of experts of the world, the horticultural possibilities of California were unexcelled by any other country. But, adds Mr. Mills, with all these favors, there are factors to be met as yet by California fruit growers, among which are those of moisture, fertilization and difference of soils. In addition to these vital points are those questions of pruning, dry and wet seasons, etc. Now, the only question, or rather subject, left untouched by these gentlemen, and yet the most important of all, was atmosphere and its conditions.

Instances innumerable could be cited during the season just past wherein the most rigid exactments of cultivation, fertilization, irrigation and pruning were fully complied with, and yet the fruit was small. An apple orchard, standing upon a dry, arid hillside, was sprayed five times this season, with the result that the fruit was large and beautiful, while adjacent orchards, with conditions the same, but unsprayed, produced small and worthless fruit. Even in the orchard of large and perfect fruit, two rows standing on a high ridge fully exposed to sun and wind yielded rather small apples, because the moisture imparted by the spray pump was evaporated before the leaves and fruit could absorb it.

If this simple and rather imperfect experiment proves anything, it demonstrates that the size of any fruit depends largely upon the amount of humidity supplied for its absorption by the surrounding atmosphere; and without these conditions, or where their presence is meager, all the irrigation, cultiva-

tion and pruning in the world will not fulfill our expectations as to size, if not to quality. Orcharding can not be successfully conducted without thorough cultivation, fertilization and pruning, and these are factors within easy control, but we can not harness nor place under obedience the air. The expense of supplying artificial moisture to orchard foliage would defeat the endeavor.

The conclusion is then, in consideration of the facts herein set forth, that an excessively dry atmosphere, rendered so through a lack of sufficient rainfall for several successive seasons (so that little, if any, evaporation from the orchard lands occur), is the exclusive cause of the diminutive size of the prune for the season of 1900.

A. KAMP.

Mountain View, Oct. 22.

But there is surely evaporation from irrigated soil and a certain degree of atmospheric humidity produced thereby. We are very sure that we do not want a humid summer air such as comes from showers. If we had such an atmosphere, we could not grow such fruit as we now produce, and we would have to fight insects and fungi which now cut no figure. We believe the cause of small prunes is lack of moisture thoroughly distributed throughout the soil mass reached by the roots. There may be much irrigation and yet this result not attained.—Ed.

## THE DAIRY.

### Advantage of Keeping Dairy Records.

By SAMUEL E. WATSON, San Francisco, at Seventh Annual Convention of the California Dairy Association.

Like other dilatory people on this programme, I have waited until the last moment in writing my paper and have even called on others for suggestions. A Sacramento friend, to help me out, related the experience of one of the successful mercantile firms of the city, which invested some of its earnings in orcharding. An elaborate plan of keeping records was instituted by which each tree on the place had its column and was charged with its proportion of expense and credited with the value of the fruit it produced, but the system which had been successful in a great mercantile business proved to be a failure when applied to fruit growing and was abandoned.

I have learned from my own experience that book-keeping must be adjusted to the nature of the business and simplified as much as possible for limited operations, and have learned that careful records are essential however small the business may be. I believe this so firmly that in starting a miniature dairy as a foundation for an increase, I have undertaken to weigh the milk from each cow morning and evening and take weekly tests of the butter fat. It does not seem feasible to charge the cost of maintenance separately, and I propose to get this by estimate at the end of the year, when comparing total outlay for feed with recorded value of products.

**OCCASIONAL WEIGHINGS.**—H. B. Gurler, a successful Eastern dairyman, suggests that if the milk cannot be weighed at every milking it may be weighed periodically, for three successive days in each month or four times a year, and the composite test be made. He says that a reasonably accurate record may be kept by this occasional test and that by comparison with the actual sales it may be verified.

It seems to me that after the milk from an animal has been weighed and tested for a season and its yield determined that an occasional test is sufficient. It is not likely that the percentage of fat will vary from year to year, therefore superficial records of the yield from a cow which has been thoroughly tested seems to be all that is necessary, but the close test suggested should be made after the animal has reached maturity.

**USES OF RECORD KEEPING.**—The advantage of knowing the value of every cow is too apparent to require discussion, but there are secondary advantages which may be mentioned. While it is a satisfaction for the owner to know the earning capacity of each individual in his herd, the fact that he begins to keep a record will educate him in dairy principles. If the test proves him to be wrong in his fixed beliefs the next step will be made in searching out the reason, and this opens a wide field for study, with the ultimate result that he will be taken out of the old routine for the mutual benefit of himself and his cows.

Others than the head of the family may be interested in the herd and the keeping of records gives the wife and older children an insight into affairs of the dairy. A son or daughter will often be ready to keep the accounts, for a moderate compensation, and in these days of commercial education in the schools a great deal of waste energy may be utilized in this way, to the mutual benefit of all concerned. It is often a problem as to the future of the boy or girl and they are usually allowed to drift into any employment that may offer when at the working age. I believe it is better to give them something to do at home, just as soon as they can be made useful and also to compensate them as an inducement to persevere. In addition to keeping the records, they may be

given the testing and chemical problems to solve thereby applying some of the school studies in a practical way in which a moderate salary is an incentive to continuous and increasing effort. The dairy business includes so many practical and scientific questions that the most ambitious boy or girl can stay right at home and find satisfactory employment.

**ARE RECORDS IMPORTANT?**—We may all agree that it is desirable to keep a dairy record, but there is a difference of opinion as to its practicability. Every one must decide for himself as to the thoroughness with which such work is done, and be guided by the conditions surrounding him. We know from experience that any business is better conducted when a well defined system is followed, and that if a check is kept on the daily routine we are able to keep ahead of details which would otherwise accumulate and bury us. If our affairs are allowed to drift and crowd upon us we never know where we stand or which thing to do first, but if a system is established in which the aid of a member of the family on the farm can be relied upon for arranging the details in an orderly manner, it is wonderful how much can be accomplished by a directing hand.

Every business man in the cities knows that farmers neglect their correspondence and a reply to a letter may be expected at any time within the year. Their accounts are usually kept in the same irregular manner and I know from experience that a bill for subscription may lay around the farmer's ranch for several months, buried under an assortment of circulars and letters. There are many exceptions to this and in such cases you may expect to see a well conducted farm in every respect and dairy records will probably be produced on inquiry.

It is an absolute essential to marked success that an exact knowledge of the sources of profit and loss are available when required. Dairying is not an exception and the farmers of the great interior valley of California, who are engaging in the business, should be made to realize the advantage of testing every animal and keeping only those which are profitable. I firmly believe they cannot build up a money-making dairy business unless this is done, and it is easier to acquire the habit of keeping records at the beginning than after getting into the usual rut, where such things are neglected.

### Does Dairying Pay?

By W. J. McNULTY in the Fresno Republican

**CALVES FROM OREGON.**—The San Joaquin Ice Co. has just received from Oregon the third shipment of dairy calves, 219 head of which were shipped to patrons of their skimming stations at Guernsey. A large number of these calves are being purchased by residents of the district west of Fresno. The district is well adapted to the growth of alfalfa and there is already enough alfalfa growing out in that section to support several thousand head of dairy cows. With the exception of Mrs. Eshleman-Sherman's herd of thoroughbred Holsteins, there are very few thoroughbred dairy cattle in this part of the San Joaquin valley. These grade Jersey and Holstein calves from Oregon will greatly improve our dairy stock. It is the intention of the company to send an expert back East some time during the month of November, and he will select for the patrons of the creamery from the very best herds, two or three carloads of young thoroughbred Jersey and Holstein bulls. These will all be registered, and great care will be exercised in their selection. None will be purchased whose dam will not have been tested and are in the fourteen-pound list, that is, cows producing fourteen pounds of butter in one week.

The best individual cow known to us is in the vicinity of Guernsey. She is a grade Holstein. This cow supplies a small family with butter and sixteen pounds are delivered weekly to a store in Hanford. The question is often asked, "Does dairying pay?" It is our opinion that there is no other place on the map of the world where one's finger can be placed, where feed can be grown so abundantly and cheaply as in the San Joaquin valley.

**ALFALFA AS BUTTER FEED.**—Alfalfa is pre-eminently a cow feed, and the butter product from the milk from alfalfa-fed cows, if skillfully and scientifically handled, produces a flavor and texture that cannot be surpassed. In proof of this we can point with pride to the fact that in 1898 the first premium at the State Fair was given Miss Minnie Eshleman of Fresno, and at the recent State Fair held at Sacramento the first premium again came to Fresno.

It used to be that butter made from alfalfa milk was looked upon with disfavor, but that day is now past.

It is predicted that within the next five years every acre of alfalfa in the San Joaquin valley will be covered with dairy cows, and that experienced dairymen from all over the State will come here to settle. Cows can be run on the green pasture of the San Joaquin valley the year round, yet California has to look to the East each year for 1,500,000 pounds of the butter that is consumed in this State. Think of Iowa and Wisconsin, frozen solid during six months of the year, furnishing this favored country with what



should be produced here at home. We, here in the San Joaquin valley, can produce a pound of butter for less than half what it can be produced for in either in Illinois, Iowa, or Wisconsin. If our trade is not extended to Hawaii or the Philippines, we will have to look to the East for our market. The alfalfa sections of California are the only sections in the State that can naturally find outlet for their surplus butter in the East, for the reason that the best expert cannot tell the difference between our best alfalfa butter and what is termed "Elgin Gilt Edge."

**WHAT A FORTY-COW DAIRY DID.**—What our farmers are most vitally interested in is the question as to whether dairying pays. We submit herewith a copy of a letter received from one of the patrons of the San Joaquin Ice Co's. creamery, who has kindly consented to have published:

The 1st of October winds up my first year in the dairy business. I send you a statement of what my cows have paid me during the year.

I have milked on an average of forty-three cows per month, sold during that time butter fat to the amount of \$55.93 per each cow, also raised and sold calves and hogs to amount of \$19.71 per each cow, making the total earnings of each cow for the year, \$75.65.—G. S. HEWITT, Kingsburg.

During the early investigation of the dairy question by the manager of the San Joaquin Ice Co. in the vicinity of Selma it was ascertained that cows whose milk was taken to the creamery were paying on an average of from \$37.50 to \$45 per year. In the vicinity of the Star creamery at Courtland on the Sacramento river, cows were paying on an average of from \$40 to \$50, and in the Coos Bay country cows were paying even more. A great deal of this variation is due probably to the quality of the milk stock.

**AN AVERAGE.**—Ordinarily the proceeds from a cow whose milk is delivered to a creamery ought to be from \$45 to \$55 a year. The sale of the calves and hogs fed from the skimmed milk ought to go further to increase this amount from \$15 to \$20. This latter amount is generally figured as the expense and feed of a cow, so that the first amount, \$55, may be looked upon as clear profit. The average field of alfalfa will support three cows to every two acres. In this connection the following is of interest:

**MILK OR BEEF.**—The relative earning power of a good Jersey cow as compared with a good Durham beef steer, experience has demonstrated that the best steer yields most profit when butchered at two years old. After that age all increase of weight is secured at an increased cost that reduces the net profit. The good Jersey cow at two years old just begins her work of milk making, reaching her highest point of production at the age of eight years.

The beef crop is biennial, ripening at the end of two years; the cow crop is perennial, yielding daily returns for a series of years.

According to the best authorities, a steer at two years should weigh 1000 pounds, which at 4 cents a pound would be \$40, which will have cost \$20, being a net profit of \$20. A good Jersey cow at maturity, weighing 875 pounds, will yield in one year 6600 pounds of milk. Allowing eighteen pounds of milk to the pound of butter, this will yield 366 pounds, which at 20 cents, makes \$73.20. This for eight years will make a total of \$585.60. In the meantime the calves that she has produced will pay in full all the cost of feeding and caring for her.

From the above it will be seen that in a year of her activity the Jersey cow will make very nearly four times as much as the steer was two years in making.

According to experiments made by Prof. Jordan at the Maine station, the milk solids are wholly edible, whereas only 58.3% of the dry matter of the steer's body is found to be so. This being true, the edible milk solids having about  $\frac{1}{2}$  the energy of edible beef solids, the cow accomplishes as much in one day toward supplying the human family with motive power as the growing steer did in eight and a half days. It appears then, that as a transmitter of the grass of the field into high-grade animal food for human consumption, the cow and the steer are not in the same class.

"Is the Paris Exposition profitable to exhibitors?" is a question now being discussed toward the close of the latest international exhibition which rounds out fifty years of such display. The general expression of opinion seems to be that the exhibition did not pay those who exhibited. This paper thinks differently. It thinks that such exhibition was opportunity for good advertising; and a good advertisement of a good article always pays. Those who are adverse in their comment on the conduct of the big Paris show are, however, undoubtedly right in saying that the wholesale giving of medals and honors brings the whole thing into contempt. In a manifest desire to please every one the French fair directors have cheapened their awards and have permanently hurt whatever prestige attaches to their receipt. The fact that the fair itself is not a financial success will go far toward deferring any future effort of the kind in any European capital.

A "KNOT" is 6086 feet. The indicated rate of 18.54 knots per hour made by the battleship Wisconsin, in Santa Barbara, Cal., channel on the 11th inst., was at the rate of 112,834.44 feet, or 21.37 miles, per hour.

## THE FIELD.

### Diversified Farming.

By RAY TRUSSELL of San Pasqual, at the Farmers' Institute, Escondido.

To give my ideas of "diversified farming," a general application to the conditions surrounding Escondido, I will give my experience on a dry ranch that lay between the Otay and Tia Juana valleys. When I first went there, some fifteen years ago, I took up Government land of loose, red soil on a hillside and put out an orchard—all kinds of trees—and took fairly good care of it. All went well for a year or two—as long as the soil stayed and the trees were young and did not need much water. But when the trees got big enough and needed something more than sky water, and a neighbor had got a good portion of my soil—well, to tell the truth, those trees spoke more eloquently for themselves in regard to a good irrigation system and in regard to a good, deep, level soil than I could possibly speak for them; and the profits derived from them spoke more eloquently yet in regard to using good horse sense in selecting varieties of trees that are suitable to your locality. Out of 100 trees there were six lemon trees, other conditions being favorable, that would have been profitable.

**HOW TO SAVE RAIN.**—I raised hay and grain for several years and at last adopted this rule which I carried out: I dry plowed my land and sowed it dry in last of October or first of November, and raised as good crops as any of my neighbors, and better than some, and, marketing my crop as quickly as possible after harvesting, always got the top price before enough had been rushed in to lower the market. I also raised some potatoes, tomatoes, beans, etc. To prepare the ground for the potatoes I plowed it early in the fall, kept it stirred until time to plant in February and took good care not to plant too close—3 feet in rows and rows 4 feet apart. I cultivated after every rain. I did not do anything great then, but got perhaps twenty or thirty sacks per acre. The tomatoes I raised by starting slips in August and putting them out on ground free from frost after the first good rain. They would come on early and were profitable, bringing in at the rate of \$100 per acre or more. But, for all that, I found something better and left my ranch and rented a better one.

If I farmed such land to-day as the most of that around Escondido, I would get all the Signal Service bulletins to date and sit down and try to figure out what nature was going to do for me in the future by what she had done in the past. I do not think that would be much; but if it were no more than 10 inches of rainfall per annum, I would figure then how much it would cost raised artificially. Ten inches of rain by the 1000 gallons would cost \$2.75 per acre; and, by the way, the Escondido irrigation district would charge 80 cents per inch for twenty-four hours—between \$17 and \$18 per acre. Now, if water is so valuable, I would consider that if I set about to do my share to keep that moisture, or, when nature had done her share, I would do mine, there would be less cause for complaint.

**WINTER WORKING.**—I have seen people in summer time try to bring moisture out of a clear sky and dry earth by cultivating. I do not condemn cultivating, but approve of it at all times; but if these same people had done a little more work in the winter time after the rains, when the moisture was evaporating by the cartload every hour, their efforts, as a whole, would be forty times more satisfactory.

**DIVERSIFICATION.**—On such farms as surround Escondido there is no doubt in my mind but what farmers could do better by diversifying their crops than they could do by raising all hay or grain. Prepare your best ground for a small patch of potatoes, melons, etc.; keep all the moisture in that falls and do not plant too close; rotate your hay and grain land with fodder corn, sugar cane, beets, pie melons, etc. Keep chickens and cows—by all means keep cows. Feed them all the green stuff and dry hay they will eat every day, and feed them at least three times a day; if you overfeed them for a single time, do not starve them till they clean it up, but remove the food left and give it to something else. In other words, stuff them, humor them and treat them kindly. Under such conditions any ordinary cow will bring \$40 per year; an extra good cow will bring \$70 or \$80 per year. All this can be done by diversified farming if you will do as much thinking as growing. It will diversify your mind, as well as your farm, and maybe change your politics.

In San Pasqual we make a success of raising all kinds of vegetables, but we are not so favored with water as many suppose. I could irrigate only once last winter, and then in January, except ten acres I irrigated in May. We make a specialty of dairying and growing apricots, although walnuts do well.

Three acres of alfalfa will keep at least two cows, and as a cow is worth at least \$60 or \$65 per year to us, we do not care to replace our alfalfa with anything else, unless the alfalfa gets killed by gophers; then we plant melons, corn and vegetables for a year to get the land mellowed up again. Watermelons seem to appeal to our natures very strongly during

the hot weather, and, as others are similarly afflicted, we find our melon patch profitable. We never miss getting at least a small crop of apricots, and generally when the balance of the State is short we have our best crop.

Almost all or as much depends on good marketing as to raise crops; prices vary, and a person should consider marketing as much of a science as production.

## CORRESPONDENCE.

### Notes from Kings County.

**TO THE EDITOR:**—The horticulturists and stock or dairy men of Kings county have had an unusually prosperous season. Fortunately the northeastern part of the county, where the wealth and energy are mainly centered, is blessed with reliable irrigation from Kings river, one of the best streams flowing into the San Joaquin valley.

**TULARE LAKE.**—In former years, before the water was diverted for irrigation purposes, it flowed into a slight depression and formed Tulare lake. That body of water is a thing of the past, soon to be traditional. But instead of dry and non-productive plains, yielding hardly enough of the native grasses to sustain the scattered herds of pioneer stockmen, we now see the country under a thorough system of cultivation, with orchards alternating with alfalfa fields. Neither frost nor drouth cut short the fruit crop this season.

**ARMONA ACTIVITIES.**—Armona is the principal shipping point, being in the center of the fruit region. The Hanford & Armona Fruit Exchange (J. K. Armsby & Co.) at Armona, will send out the most extensive pack. Mr. Worswick, the manager, states that they will probably ship 150 carloads of raisins, 75 carloads each of dried apricots and peaches, 50 of prunes, 10 of pears, and 5 of nectarines. They have 100 employees at work in the packing-house. Chas. Downing, at Armona, shipped 75 carloads of fresh fruits. His packing-house has a capacity of three carloads per day, and he has fifty-five employees. He will ship seventy-five carloads of raisins, and about the same quantity of assorted dried fruits. B. L. Barney, also at Armona, will ship forty carloads of raisins and forty carloads of prunes and other fruits. Albert Brown & Co., Armona, will pack forty carloads of raisins and thirty-five carloads of other fruits.

**HANFORD.**—At Hanford, the Fontana cannery, now one of the institutions of the Fruit Canners' Association of California, has finished its pack, and is ready to ship. It put up 80,000 cases, and during the busy season employed 500 operatives. The peaches and pears raised in this vicinity were first-class the present season, but the apricots were not up to standard. No plums are grown hereabout, which the superintendent of the cannery (E. B. Knight) thinks is unfortunate, both for growers and canners. It is a fruit which could be handled between the seasons of other varieties, and a good demand always exists. The growers should make note of this. The Hanford cannery bought 6000 tons of fruit that was shipped to other canneries of the association, going as far north as San Francisco, and as far south as Los Angeles and Santa Ana. The Earl Fruit Co. shipped about seventy-five carloads of fresh fruits from the Hanford district the present season. The Ensign Packing Co., at Hanford, which now employs at least sixty operatives, will pack 150 carloads of dried fruits, including raisins. The Hanford Raisin and Dried Fruit Packing Co., a co-operative concern, will ship sixty carloads of raisins. The North Ontario Packing Co., at its Hanford branch, will ship four carloads per week from now until the last of December. It is packing the Commander brand of prunes, and is not in the association. It employs forty-five operatives. We were not able to secure data from J. B. Indirieden & Co., but their pack at Hanford will probably exceed that of any other house, as it is an extensive concern.

**DAIRY INTERESTS.**—The dairy interests of Kings county are growing, and increased attention is being paid to the raising and breeding of beef cattle and hogs. The Hanford cheese factory is an old established institution. It has forty-five patrons, who are now bringing to it an aggregate of 7000 pounds of milk per day. This makes 700 pounds of cheese, which finds a widely scattered market in this State. The Kings County Creamery, formerly located at Lemoore, is now at Hanford, where the number of patrons is slowly increasing, being now fifteen, with a total daily product of 2000 pounds of milk. A skimming station is maintained at Lemoore, with 2600 pounds of milk daily; at Lakeside, with 2700 pounds daily; and at Gallup, with 2700 pounds daily. All three ship cream to Hanford, where the butter is made. The San Joaquin Ice Co., also maintain a skimming station at Lemoore, shipping the cream to Fresno. The latter company has brought many young heifers into the valley from Humboldt county and Oregon the present season, and many of these animals have been purchased by dairymen in Kings county.

H. G. P.

Hanford, October 25.



## Agricultural Review.

### BUTTE.

**PROSPEROUS PALERMO.**—Honcut Times: Fifteen years ago Palermo was a red dirt waste, fit only to pasture a few sheep during the winter and early spring. Twelve years ago a few venturesome men were setting out orange and olive trees there. Five years ago Palermo was shipping oranges in carload lots. To-day her citizens are among the most prosperous and her buildings among the best of any town of her size in northern California.

**SOME PUMPKINS.**—Biggs Argus: M. T. Snider of West Biggs has this year a pumpkin vine  $3\frac{1}{2}$  inches in diameter at the stalk, which covers a space of ground 32 feet wide by 48 feet in length, and measuring extreme points of runners extends over 7 feet. From this vine he has pulled seventeen pumpkins of an average weight of thirty-five pounds, nine pumpkins of about equal size are still attached to the vine and there are 100 or more young pumpkins from the size of a walnut to several pounds in weight also on the vine, which is in adobe soil well manured. Over a half ton of pumpkins have matured on this vine.

### COLUSA.

**CHOICE PRUNES.**—Colusa Sun, Oct. 27: Among the best prunes being delivered to the Association in any part of the State are the product of the orchards of Messrs. Boedefeld and Berkey, on the east side of the river, and on overflowed land. Both orchards were overflowed twice last winter to the depth of 4 feet and more. The last overflow was when the trees were in bloom. They had larger prunes and more pounds per acre than almost any other orchard in the State.

**GOOD PROSPECTS.**—Williams Farmer, Oct. 27: Rain during the week has been very beneficial to farmers and orchardists, and has caused but little damage to late crops, so far as can be ascertained. In some localities drying prunes were slightly injured, and bean drying was retarded. Oranges are coloring and at present there are good prospects for a heavy yield of fine fruit. Olives are ripening rapidly and pickling has commenced. The seeding of summer-fallow is nearly completed in some sections and progressing rapidly in others. A large acreage is being sown. Early-sown grain is coming up and looks well.

### FRESNO.

**RAISIN THIEVES.**—A reward of \$25 is offered by the California Raisin Growers' Association for the arrest and conviction of any one who shall steal raisins from the vineyard of a member of the Association.

**LOSS TO THE RAISIN ASSOCIATION.**—Fresno Democrat: The loss to the membership of the Raisin Growers' Association by the recent fire at Del Rey is the heaviest that it has ever experienced, amounting to about \$30,000. There have been fires before—one in a packing house owned by Vice-President Nathan, which burned last year—but all were not of the value of the Del Rey house. While the loss seems a large sum, it only represents  $\frac{1}{2}$  of 1% of the value of this year's crop.

### RIVERSIDE.

**FRUIT SHIPMENTS.**—Riverside Press and Horticulturist, Oct. 26: Riverside shipped two cars of lemons this week, making 192 to date. A small shipment of Navels will be made from Ontario this week, and a shipment was made from Redlands Saturday. The southern California shipments to date are 17,746 cars of oranges and lemons, as against 10,343 last year and 15,102 two years ago. Two cars of oranges and twenty-two cars of lemons were shipped last week. California has shipped 5935 cars of deciduous fruit, as against 6300 cars last year.

**APPLES FREE FROM MOTHS.**—Riverside Press: W. L. Peters, S. C. Evans, Jr. and F. E. Abbott returned on Saturday night from Yucaipa, where they had been inspecting the big Peters ranch. There will not be a large crop of apples on the ranch this year, but the quality of the fruit is very fine. Not a worm is to be found in the apples. Great care has been taken to secure the freedom from this pest. Not a single box, basket or wagon which has been used for apples in other orchards is allowed on the ranch, nor is the fruit ever taken onto the place from another ranch. By this means Mr. Peters hopes to keep the codlin moth out, and so far has been very successful. Mr. Peters will plant out fifty acres more to apple trees next February, and engage in apple growing on a large scale.

### SAN BERNARDINO.

**LARGE ORANGE CROP.**—Citrus Belt, Oct. 19: Packers and shippers are already on the ground preparatory to handling the largest and what now promises to be the finest crop of oranges ever

grown in Highland. Sizes will be very much better than last year and the fruit is unusually smooth.

**DEAD FOREST TREES.**—San Bernardino Sun: There is a large quantity of dead wood on the mountains, and especially in the forest reserves belonging to the Government, that would be better out of the way than where it is, as it furnishes fuel for the forest fires. There is a law against cutting such wood and when Gold Mountain residents found their fuel supply running short they sent down word to Supervisor Hanna for permission to cut this wood on the reservation, and Mr. Hanna is trying to arrange the matter to the satisfaction of the residents and at the same time not interfere with the law in protecting the timber on the reservations.

**HERMOSO ORANGE COMPANY.**—San Bernardino Sun: Articles of incorporation have been filed for the Hermoso Orange Company, the object of which is to buy, sell and handle fruits and farm products, the principal place of business being at Riverside, the capital stock \$100,000, in 1000 shares of \$10 each, of which there is actually subscribed the sum of \$90,000, as follows: Chase Nursery Company \$39,000, E. A. Chase \$10,000, F. F. Chase \$10,000, H. B. Chase \$10,000, M. A. Chase \$10,000, F. M. Heath \$2000, B. B. Bush \$2000, H. T. Hays \$1000, T. A. O'Donnell \$3000, Mrs. Leola Mason \$2000, W. W. Wilson \$1000. The first board of directors consists of E. A. Chase, F. F. Chase, H. B. Chase, M. A. Chase, F. M. Heath, B. B. Bush and H. T. Hays.

### SONOMA.

**END OF WINE SEASON.**—Cloverdale Reveille, Oct. 27: This week will see the end of the grape season as far as Cloverdale is concerned. A careful estimate of the wine made places the amount at 400,000 gallons dry and 100,000 gallons sweet wine. This is independent of the Italian-Swiss Colony.

**A DWARF CALF.**—Petaluma Courier: There was born at the ranch of Wallace Gale last Tuesday a calf which weighs eleven pounds. It is perfectly formed and its eyes are bright, but it cannot as yet walk. Owing to its diminutive size it will have to be "raised on the bottle." Mr. Gale put a five-pound lard can over the animal's head and still had room in the can for both his hands.

**PEACH TREES NOT PROFITABLE.**—Sebastopol Times: It is well known that some portions of Anale township are not adapted to peach culture, and in consequence the farmers are considering what they will plant to replace the dead peach trees. Some orchardists are seriously considering digging up their entire peach orchards and replacing them with other fruits. The apple meets with general favor, especially the Gravenstein, as well as some other leading varieties which are good both for drying and shipping. Peaches here are not very satisfactory in many ways, and the general opinion among fruit men is that it is a good move to replace them with other fruits.

**PRUNES AVERAGE LARGE.**—Healdsburg Tribune: The prunes being received by the Star Dried Fruit Co. run about 20% 40s to 50s and 30% 50s to 60s. From fifty to sixty carloads are now in the packing house. Shipments are light at present, but a large business is looked for as soon as politics ceases to absorb the attention of the public. The work of grading the prunes is progressing rapidly.

**GLEN ELLEN NOTES.**—Santa Rosa Press-Democrat, Oct. 24: The wine making in the district is about over. This has been a prosperous year for both grape growers and wine makers. The price paid for grapes was from \$18 to \$20 per ton and the percentage of sugar in the grapes was from 24 to 30, better than ever before in this locality. A great deal of wine has been made here. Joshua Chavet takes the lead. He has made about 190,000 gallons, Mr. Steiger about 100,000 gallons, Frank Lemoine 50,000 gallons, Scheick Bros. 20,000 gallons and Julius Wegener 10,000 gallons. There are a number of smaller wineries, the vintage of which has not been reported. The prune man has not fared so well. The prunes are small and there is no market. The growers are not well pleased with the discrimination of the combine between the Sonoma and Santa Clara prunes, claiming that the Sonoma prune has more sugar and a better flavor than the Santa Clara prune. The farmers have started to plow in many places. The grass is growing and the stock is doing well. The "chickens are on a strike," so the farmer's best friend is not now producing much of anything.

### SAN JOAQUIN.

**BROOM CORN CROP.**—Lodi Sentinel, Oct. 27: The broom corn harvest has been completed at New Hope with a very good result. About 600 acres were planted by Arthur Thornton and others, who will realize a substantial profit on their labors.

There are two sources of revenue from this crop, one from the broom part and the other from the seed. The broom brings from \$80 to \$100 per ton, while the seed sells for about \$12.

**RAIN DID LITTLE INJURY.**—Lodi Sentinel, Oct. 27: The heavy rain of last week did but little damage. The storm cleared off in time to prevent the beans from molding and becoming soggy. The growers have since been busy turning over the windrows in order to thoroughly dry the pods before threshing. Should fair weather continue for two weeks the crop will be safely harvested. There is a large acreage in this county this year and it consists principally of Pinks.

**GOOD MARKET FOR HAY.**—Stockton Mail: Samuel Hewlett says that he has purchased over 4000 tons of hay during the past month, for which he paid as high as \$9 per ton, or about \$30,000. Since July he has paid over \$40,000 to farmers for hay. Mr. Hewlett says that 25,000 tons, valued at \$150,000, were raised in this county this season.

### STANISLAUS.

**CATTLE DIE OF BLACK LEG.**—Stockton Mail: Dr. Eddy, the veterinary surgeon, who is assistant agent of the State Dairy Bureau, has returned from a trip to Newman and Crow's Landing, whither he was summoned to investigate the death of twenty-two head of calves. All the animals died within four days—twenty head in a field belonging to Mr. Crow and twelve head on the farm of Mr. Fink. The disease proved to be black leg. It seems to have run itself out, as none of the remaining cattle showed symptoms of it. Dr. Eddy reports that there are a few cases of black leg among cattle in San Joaquin county, and that several cases having symptoms of anthrax—a fatal disease—are also reported.

### SANTA CRUZ.

**WATSONVILLE FRUIT NOTES.**—Pajaronian, Oct. 25: Eastern and foreign shipments of apples for the past week were 56 cars; total for season, 284 cars. Balfour, Guthrie & Co. are rushing out Newtowns and they are going to all parts of Great Britain, to the continent, and even to Australia. There has been a heavy percentage of windfalls in some of Pajaro's orchards this year. Much of this drop is being marketed in some form, but, of course, not at prices equal to those for choice stock. The orchard waste—and it is enormous in this valley—should find more profitable ways of being utilized. The trees in the orchards are almost bare of apples. The work of picking will end several weeks ahead of last year. Scores of teams are finding regular employment in hauling the enormous crop to the packing houses, and the roads of this township have never had a heavier freight of soil products hauled over them daily.

### SAN LUIS OBISPO.

**A BIG BEAN YIELD.**—Arroyo Grande Herald, Oct. 20: Jas. Sanford, whose ranch is about three miles east of town, is harvesting his bean crop and on thirteen acres he will have thirty-three sacks per acre; the rest of the ranch will not average so high, but will make a good yield. He has been offered \$3.40 per cental but has not sold yet.

### TEHAMA.

**VALUE OF A LOAD OF WOOL.**—Red Bluff News: The wool from the Cone ranch is being hauled to the warehouses. Two large wagons drawn by eight mules are being used for the purpose. Forty-four bales, twenty-two on each wagon, weighing about 16,500 pounds in all, makes a load which at 9 cents per pound foots up nearly \$1500.

### TULARE.

**BIG TUBERS.**—Visalia Times: A gentleman residing near Visalia a few days since went into his garden after a mess of sweet potatoes and dug up a tuber that was 3 feet and more in length. He has another one growing that he says will be still larger.

**FINE STOCK.**—Visalia Delta: J. D. Waugh, who resides in the Auckland district, is engaged to some extent in cattle raising and believes in having none but the best on his ranch. Mr. Waugh has received by express from Tipton, Iowa, a thoroughbred pedigreed bull calf of the Aberdeen Angus stock. It is six months old and now weighs 700 pounds. The calf came from the farm of A. Spear, who has made it a business to raise thoroughbred cattle. The calf cost Mr. Waugh, delivered at Visalia, \$428, express charges being \$103.

### VENTURA.

**LIMA BEAN CROP.**—Oxnard Courier: There are now in the Oxnard warehouse over 65,000 sacks of this year's crop, which is equivalent to 2760 tons. In the Montalvo warehouse there are 30,000 sacks, or 1275 tons. In the various other

warehouses of the county there are also many thousands of sacks, bringing the total up to date in the warehouses alone to about 150,000 sacks. Add to this the beans still unthreshed and yet in the fields, those that have been shipped, etc., a conservative estimate of the year's crop in the county is placed at 225,000 sacks, or 9062 tons. To many people this will probably seem an overestimate, but it has been placed even above these figures by men who are in the best possible position to know. It is not intended to show that this year's crop is an exceptionally good one, for anyone who knows anything at all about the conditions in the farming districts of the county knows better, but it is aimed to show how exceptionally well favored are the bean farmers, who, even though receiving only a part of a good year's return, receive enough through the better price to almost make up for the deficiency. The largest yield of any yet received here this season is 1900 pounds per acre. This was on irrigated land near Oxnard. Irrigated land around Saticoy, El Rio, Ventura and some in Pleasant Valley has also done well. On the other hand, in every one of these localities light crops have also been received on soil of an alkali tendency and on unirrigated ground.

**OXNARD SUGAR CAMPAIGN.**—Chino Valley Champion, Oct. 26: The second annual beet sugar campaign of the Oxnard Sugar Factory closed last week, with a longer run than last year by three days, and a record of having sliced 3462 tons more than last year. The percentage of saccharine matter is also considerably better, and, taken all in all, the great sugar campaign of 1900 is one that will long remain as a surprise to the people of this county, who early in the season hardly dared to hope for the opening of the factory at all. A crop that can be raised in a dry year following two preceding dry years and then make a record in some respects superior to that of a wet season is one that should receive favor in the eyes of all farmers, especially when greatly improved prices have been contracted for the coming season. This year's run has clearly demonstrated that beets are a crop as little affected by dry weather as any that can be raised. In a wet season there is a very heavy tonnage, but at the same time there is a very marked decrease in the sugar content. Many farmers have this year expressed themselves as being well satisfied with eight to ten tons per acre and the higher percentage that accompanies it, as with a twenty-ton yield, with the heavier expense and decreased sugar content. From Oxnard and vicinity 63,148 tons of beets were received and from Chino and outside points 4017 tons, making a total of 67,165 tons.

### YOLO.

**PROFITABLE FARMING.**—Woodland Mail: A forty-acre vineyard a few miles northwest from this city has just cleaned up \$100 an acre, viz., \$4000. J. C. Allpeter has sold Seedless Sultana raisins from about two and a half acres of vines for a little more than \$500 on a place near Woodland. J. E. Martin has just received his cash for a crop of soft-shelled almonds from 500 trees on acreage lot 63 of Esparto colony of \$1275. Dr. Craig got over \$500 from his two acres of Seedless Sultanas on his Esparto lot.

**CREAMERY RETURNS.**—Woodland Mail: E. J. Merritt, manager of the skimming station of the Woodland creamery at Yolo, states that the station is now handling 6000 pounds of milk daily, an increase of 4200 pounds over the first day. Albert Bemmerly of Yolo is milking twenty-four cows, which milk he takes to the creamery. He recently realized in one month the sum of \$194 net, the gross receipts being \$228. That's a good showing, his cows averaging for him \$8.12 $\frac{1}{2}$  a month above all expenses. At that rate a cow is worth something, her annual earnings being \$97.50.

**Horse Owners! Use**  
GOMBAULT'S  
**Caustic Balsam**  
A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.  
THE LAWRENCE-WILLIAMS CO., Cleveland O.

**LEE D. CRAIG,**  
Notary Public and Commissioner of Deeds,  
316 MONTGOMERY STREET,  
Bet. California and Pine, SAN FRANCISCO, CAL.



## THE HOME CIRCLE.

## From Day to Day.

## THE BEYOND.

It seemed such a little way to me,  
Across to that strange country, the be-  
yond,  
And yet not strange, for it has grown  
to be  
The home of those of whom I am so  
fond.  
It makes it seem familiar and most dear,  
As journeying friends bring distant re-  
gions near.

So close it lies that when my sight is clear  
I think I almost see the gleaming strand.  
I know I feel those who have gone from  
here  
Come close enough sometimes to touch  
my hand.  
I often think but for our veiled eyes  
We should find Heaven right round about  
us here.

I cannot make it seem a day to dread  
When from the dear earth I shall jour-  
ney out  
To that still dearer country of the dead  
And join the lost ones for long dreams  
about.  
I love this world, yet I shall love to go  
To meet the friends who wait for me, I  
know.

I never stand above a bier and see  
The seal of death set on some well be-  
loved face  
But that I think one more to welcome me  
When I shall cross the intervening space  
Between this land and that one over there,  
One more to make the strange "Beyond"  
seem fair.

And so for me there is no sting to death,  
And so the grave has lost its victory;  
It is but crossing with abated breath,  
And with set face a little strip of sea,  
To find the loved ones waiting on the  
shore,  
More beautiful, more precious than before.

—Ella Wheeler Wilcox.

## An Interlude.

The day was warm. In the Sacra-  
mento depot the ever increasing crowd  
swayed to and fro, surging over the  
very track on which the Overland  
train would come with its burden of  
troops from the East. Over the babel  
of voices rose the puffing and shrieking  
of engines and the rumble of trains.  
The air was heavy with the scent of  
flowers.

The long balcony in front of the su-  
perintendent's office was filled with a  
line of gravely dressed people, who  
stood patiently looking at the moving  
mass below them. There workmen  
from the great railroad shops, with  
faces begrimed and their dinner pails  
in their hands, jostled delicate ladies  
in dainty attire; and schoolboys and  
street urchins dodged under the arms  
of their elders; making for themselves  
swift serpentine paths through the  
crowd. Almost in the center of the  
station a fat Mexican woman stood  
guard over a baby buggy, in which sat  
a black-eyed infant clutching a tiny  
American flag in its dirty little hand.

There was a sudden pressure from  
the crowd at the end of the depot; and  
the band marched in to the music of  
"Rally Round the Flag," the stars and  
stripes borne at the head.

In the forward movement of the  
crowd, Gertrude Scriver found herself  
forced to the verge of the platform and  
not far from the nearest track. She  
stood there with her sister, a piquant  
figure in lavender. One year of mar-  
riage and two of widowhood had taken  
little from her youth; and she thought  
with a smile that any possible ac-  
quaintance among the troops from her  
old home could not fail to recognize  
her. A vague excitement stirred her;  
an undefined recognition of the po-  
tentialities of the incidents of life. As  
she left her home, she had plucked a  
single magnolia as an offering to some  
one she might chance to know. Now  
she held the blossom carefully, that it  
might not be crushed in the crowd.

The scream of a whistle was fol-  
lowed by the rush of a train into the  
crowded station. Soldiers leaned from  
the windows with wreaths of roses on  
their heads or stood on the platforms,  
their hands full of flowers. In the  
midst of music and cheers, women with

the Red Cross badges on their sleeves  
pressed forward with baskets of flow-  
ers, holding them up to the windows  
and liting them to the soldiers that  
crowded the platforms. In their wake  
followed a train of young girls, some of  
them demanding hardtack and brass  
buttons, and others asking for the sol-  
diers' autographs in their albums.

Mrs. Scriver stood still, eagerly  
seaning the cars as they passed, for  
the glimpse of a familiar face. Now,  
as she tried to move along the line, she  
found herself hemmed in by the crowd.  
Her sister had fallen behind, and was  
talking to an acquaintance beside her.

The train had stopped. Under the  
command of an officer, a detail of sol-  
diers, two from each car, marched  
through the waiting-room to a large  
room beyond, where a committee of  
Red Cross ladies handed them baskets  
of provisions and sandwiches and ra-  
dishes and onions, with envelopes of salt,  
and potato salad done up in candy  
boxes. The fruit consisted of oranges  
and cherries, with lemons for the sick.  
The marching of the soldiers increased  
the noise and the movement of the  
crowd.

The music of the band had changed  
to "Columbia the Gem of the Ocean."  
A boy of eighteen or nineteen leaned  
out of the window and received a bunch  
of carnation pinks with a smile. Mrs.  
Scriver watched him with momentary  
amusement. On his head and about  
his neck were garlands of flowers; and  
the buttonholes of his jacket were de-  
corated with blossoms.

She passed on, pausing a moment to  
listen to the loquacious chatter of a  
bluecoat in the next car. He leaned  
far out the window, detailing his ex-  
perience with more fluency than gram-  
mar to a group of interested listeners.  
At the next window sat a great, stolid  
fellow, surveying the scene about him  
in grave silence. She wondered idly  
what rustic region had been his home,  
and what thoughts moved sluggishly  
in his brain. Then she upbraided herself  
for her instinctive classification of him.  
Had he not volunteered to fight and to  
die, if need be, for his country? And  
had not that deed alone placed him  
above the plane of mere intellectu-  
ality?

"It is sweet and glorious to die for  
one's native land," she thought to her-  
self; and although the poor soldier had  
never heard the words of Horace, she  
felt that he knew their significance.

She was about to pass on when she  
saw him lean forward and take in the  
little crowd beneath the window with a  
sweeping glance. Then, for the first  
time, since she had seen him, he opened  
his lips.

"Where does all you folks find shel-  
ter?" he asked in solemn surprise.

She passed on, still looking for a fa-  
miliar face.

"Give me a flower, lady," said a  
saucy young voice.

She looked up into a pair of laughing  
eyes. The owner of the orbs put his  
head out of the window and she saw  
that it was crowned with a wreath of  
roses. He held a bouquet in his hand.

She shook her head and laughed.

"No," she said, "I'll save it for  
some poor fellow who hasn't any."

A voice sounded close in her ears as  
though in answer to her remark.

"They say that the boys in the cars  
at the rear are complaining that they  
don't get any attention," it said.

She pushed her way through the  
crowd, still scanning the faces at the  
windows. The large white petals of  
the magnolia had begun to droop.

The time of the stop at Sacramento  
had almost expired when she reached  
the last car. Here the crowd had  
thinned and several officers stood on  
the depot platform talking to little  
knots of people. One with stripes on  
his shoulders was standing with his  
back to her. She stopped with a short-  
ened breath and grew suddenly white.  
In a moment the crowd, the cheers,  
the music and the flags had faded from  
her senses. She stood in a suburban  
garden of an Eastern city, with the  
spicy scent of pinks in her nostrils and  
the breath of the evening breeze on her  
hot cheeks. A man stood looking down  
at her with grave, dark eyes.

"Will you send me away without a

chance of explanation?" he said.

"There is no explanation possible,  
she replied hotly. "I never want to  
see you again."

Then she turned and fled, but behind  
the mock-orange hedge she watched  
him as he went sadly away, and all her  
pride could not keep the tears from  
brimming over in her eyes.

It had been a foolish lovers' quarrel;  
but she had married and gone away,  
and they had not heard from each  
other for more than three years.

The rush of memory had occupied no  
more than a moment's time, then the  
young officer turned, as though in an-  
swer to her fixed gaze.

He started forward and held out his  
hand.

"Gertrude," he cried.

She looked at him, bewildered, and  
her eyes dropped beneath the un-  
guarded ardor of his. Both were ob-  
livious of the people and noise about  
them. Both had forgotten the years  
that had separated them. They knew  
only that they were together again.

She had given him her hand, but she  
could not speak. There was a sense of  
choking in her throat.

"Have you no word for me?" he  
said, and again his eyes were grave  
and sad, as on the day he left her in  
the garden.

"I have brought you this," she re-  
plied, holding out to him the drooping  
magnolia.

He looked at her curiously.

"How did you know I would be  
here?" he asked.

"I did not know," she answered  
simply; "but I must have felt it, for  
I would give it to no one else."

He took it from her hand and looked  
into her eyes with a searching, pas-  
sionate gaze. Then he remembered.  
He stepped back, his face suddenly  
veiled in a mask.

"How is Jack?" he asked dully.

"Jack?" she repeated wonder-  
ingly. "Didn't you know? Jack has  
been dead for two years."

A flame of color flashed in his white  
face. The scream of a whistle rose  
over the roar of voices and the soldiers  
on the platform scrambled hastily on  
the train. The crowd pressed closer  
to the cars and the girls with auto-  
graph albums began to say good-by.  
But he had moved nearer to her and  
had taken her hand.

"Trudie," he said softly.

Tears sprang to her eyes at the  
word. She had not heard the pet name  
for years.

"Gerald," she said, "it was my  
fault."

He knew to what she referred, and  
he had no time to waste words.

"It was mine as well," he replied.

"I should have written you the ex-  
planation when you would not listen. Shall  
I tell you now?"

She shook her head. The moment of  
time that was left them was too pre-  
cious to lose.

"You need never explain," she said.

"I know that I was wrong. Tell me  
what you have done since I saw you  
last."

"I went to Philadelphia to practice  
law," he replied. "My uncle made me  
his partner."

He came closer to her and spoke in  
vehement tones.

"I am going away," he said.

"Yes," she assented, "You are go-  
ing to Manila." Her voice broke and  
a mist blurred her vision. She knew  
what it meant to him; hardship,  
danger and a broken career, and she  
also knew what it would henceforth  
mean to her.

"Will you marry me if I come  
back?" he asked.

The train had begun to move and he  
turned toward it instinctively. But he  
looked back for her reply. Their eyes  
met in a flashing glance.

"Yes," she whispered.

He wrung her hand, then sprang on  
the steps of the rear platform of the  
last car. A fellow officer slapped him  
on the back and laughed.

"That was a desperate flirtation,"  
he said. But his companion did not  
hear him.

Some one on the train was shouting,  
"What's the matter with Sacra-  
mento?" And a hundred soldiers an-

swered. "She's all right."

The people began to follow the slowly  
moving train. Gertrude went with  
them, holding always her place at the  
edge of the crowd. Her eyes were  
fixed on the platform of the last car,  
where the young officer stood with his  
bantering companion. With one hand  
he was waving his cap to her, with the  
other he pressed the magnolia against  
his breast.—Virna Woods in Atlanta  
Constitution.

## Our Endurance.

During life each member of the human  
body produces poison to itself. When  
this poison accumulates faster than it  
can be eliminated, which always occurs  
unless the muscle has an interval of  
rest, then will come fatigue, which is  
only another expression for toxic in-  
fection.

If the muscle is given an interval of  
rest, so that the cell can give off its  
waste product to keep pace with the  
new productions, the muscle will then  
liberate energy for a long time. This  
latter condition is what we call endur-  
ance.

Like any other ponderous and in-  
tricate machine, the body requires time  
to get in harmonious working order.  
The brain, nerves, heart and skeletal  
muscles must be given warning of the  
work they are expected to perform.  
Ignorance of this fact has broken down  
many a young man who aspired to  
honors on the cinder path.

The necessity of getting all parts of  
the body slowly in working order is well  
understood by trainers and jockeys on  
the racetrack, as is evidenced by the  
preliminary "warming up" they give  
their horses, although it is doubtful if  
the trainers could give any physiologic  
reason for their custom.—Popular Sci-  
ence.

## Waste Not.

It is a sad fact that there is, per-  
haps, more extravagance in bread—  
the real staff of life—than in any  
other article. Pieces are thrown away,  
crumbs shaken into the fireplace, and  
crusts or "heels" of loaves allowed to  
get stale; whereas the careful house-  
keeper has a large dish on the top shelf  
of her pantry in which every scrap and  
crumb of bread left unconsumed is  
placed. Once a week regularly these  
are dried—not browned—in the oven,  
then crushed on the breadboard or  
pounded in a mortar, sifted in a wire  
sieve and stored in an earthen jar. Not  
only are these bread crumbs useful for  
broiling soles or cutlets, or for frying,

## DON'T GET THIN

Get fat; get nice and plump;  
there is safety in plumpness.

Summer has tried your food-  
works; winter is coming to  
try your breath-mill. Fall is  
the time to brace yourself.

But weather is tricky; look  
out! Look out for colds espec-  
ially.

Scott's emulsion of cod-liver  
oil is the subtlest of helps. It  
is food; it is one of the easiest  
foods in the world; it is more  
than food; it helps you digest  
your food, and get more nutri-  
ment from it.

Don't get thin, there is safety  
in plumpness. Man woman  
and child.

We'll send you a little to try, if you like.  
SCOTT & BOWNE, 409 Pearl street, New York



but, soaked for some little time in milk, they make the foundation of many sweet puddings, which are both nutritious and economical, and of which the style and flavor can be varied to any extent.—Culinary Topics for October.

#### President McKinley's Farm.

President McKinley owns a farm—a broad expanse of corn fields, meadows, cow pastures and orchards, which comprise 162½ acres. Of it a correspondent of the St. Louis Globe-Democrat writes: His well kept barns, corn cribs and wagon sheds show care and thrift. The wool on the backs of 200 sheep shines with cleanliness, for McKinley's farm is a model one and a modern one. Unlike the famous Nebraska farm of the Democratic candidate for President, the public knows little about it. Two miles from Minerva, 1 mile from Bayard, O, it stands on a sloping parcel of ground surrounded by the orchards of Baldwin apples. The Cleveland & Pittsburg Railroad crosses a corner of the farm and the Big Sandy canal courses through the field at one side of the main road.

Along a lane to a point two-thirds of the way up the slope brings the visitor into the midst of the farm buildings. To the right, the first one is the sheep barn. This two-story structure was originally the Union church, attended by the folks of that rural vicinity who worshipped on the Sabbath. Twenty-five years ago, when it ceased to be used for church purposes, it was moved from the corner of the farm next to the main road to its present site. When it stood on the corner it was just in front of the old cemetery known as the Plains cemetery, which is still there.

McKinley's farm is a profitable one. In any season when crops are good it yields richly. This year's potato crop will aggregate 2000 bushels. The corn fields have been known to produce as high as 3500 bushels in a single year. Last year the meadows produced 100 tons of hay. The oats crop this year aggregates some 700 bushels.

This is apple butter making time in this section of the country. Many of the apples on McKinley's farm, just at the present time, are being made into apple butter. The large orchard is an important part of McKinley's farm. One good year 1700 bushels of Baldwins were gathered and as many more of other kinds, making a total yield of nearly 3500 bushels. Part of the produce of the farm has been shipped to Canton from time to time to the McKinley home, but none has ever been sent to Washington. Canton is about 20 miles from the farm.

Selling milk is one of the industries of the farm. There are twenty-five head of cattle. There are nine milch cows. Some of them are blooded stock. Raising calves is also an occupation. Ten fine horses are constantly employed. These are all draught horses. Two hundred sheep graze on the hillside. One season 175 sheep were sold from this place. This shows what a good market there is for the wool and mutton which comes from the President's farm. While speaking of animals, the two dogs must not be forgotten. One known as "Shep" has been on the place ever since the President came into possession of it. The other, which, by the way, is a yellow dog, came there as a stray not long ago, and has found a good home. The chickens number more than 200. The pea fowl became too noisy and were so inclined to pick a fuss with the chickens that it was thought best to dispose of them; so they were given away.

The man who has charge of Mr. McKinley's farm is W. J. Adams, formerly of Canton, but who was raised in Pennsylvania. He is a farmer who understands his business, and it is said in the vicinity that there is not a more prosperous farm in all that section. Mr. Adams's family consists of Mrs. Adams, two boys and two girls. One hired man is kept the year round and two are employed during the busy season of the year. Mr. Adams works the farm on shares. He has a half interest in everything. The fences are all kept up and there is an appearance of

neatness which marks his work. Mr. Adams has lived on this place for the past twenty years, and Mr. McKinley is delighted with him.

The residence is a two-story structure built sixty years ago by a man named Hostetter, who by the way, was interested in the Big Sandy canal, and had it succeeded would have finished the house. But the railroad came through and the first boat that was sent down the canal got caught in the tunnel, not very far distant, and it was impossible to get it out. This was the only boat which ever made a trip on the Big Sandy canal. Mr. Hostetter was never able to finish the house; so to this day a number of the rooms have not been plastered. This residence is now getting old in appearance. It contains eleven rooms. The porch is about the size of McKinley's famous front porch at Canton, and then onto the upright part there is a wing which is a story and a half in height. The lawn is well kept, and morning glories grow upon the fences at one side.

Besides the house, there are six buildings on the farm. There is the main barn, the sheep barn, the two large wagon sheds, the scale house and the pigpen. One of the sheds shelters an immense wagon which at one time made a notable trip. It was after the election of McKinley to the presidency. Six teams of horses were hitched to the vehicle and the farmers roundabout gathered to the number of forty and drove to Mr. McKinley's Canton home, to join in congratulating him. The trip was made in about three hours.

The McKinley farm is visited each year by people who, on passing through that section, hear of the President's farm and are curious to see what kind of farmer he is. One visitor once asked for a fence rail for a souvenir of his visit. The Adams family have become used to kodak fiends, and fully realize that to reside on the President's farm is to be, in a sense, in the public eye.

#### Cleaning Pictures.

If people knew what an easy task it is to clean portraits and oil paintings they would never let them hang black and colorless on their walls. In nine cases out of ten pictures painted by the last generation of artists, owned by private collectors or individuals, have almost entirely lost their beauty by being coated with dirt and smoke, says an exchange.

The following method can be used by any careful person without fear of injury to the picture, and in many cases can restore its surface to its original freshness and brilliancy of color:

Take the picture from its frame and lay it on a large table, face upward. Have a bowl of tepid water and a good-sized sponge in readiness. Peel a large white potato and cut in half. Then, with the sponge and water, go carefully over the entire surface of the picture. In case it is badly cracked, as so many old paintings are, let the sponge be fairly dry, for if water should ooze under the paint it might crack more. Now take the potato and with the smooth side go over the entire surface while it is wet. Do not scrub hard, as that is apt to stretch the canvas and necessitate its being taken off the stretcher. The potato should move in a circular motion, which should be kept up until the canvas is in a lather. The dirt will soon begin to soften and make the lather quite black. Keep rubbing until all the spots and stains disappear, and then wash carefully and very thoroughly with tepid water and the sponge.

Unless the dirt has been varnished in, a picture will usually readily respond to this treatment.

The care of pictures is a thing that few people understand. Hot rooms, gas, dust, smoke and steam heat are all enemies of pictures. More often than not they attack them from the back. A picture will often have the appearance of being in perfect condition from the front side, while the back has been almost entirely destroyed by moths or some form of decay. This may be prevented by coating the back of the canvas with a thin wash of white lead.

—Portland Transcript.

## DOMESTIC ECONOMY.

### Timely Recipes.

**CORN VINEGAR.**—Add to one gallon of rain water one pint of brown sugar or molasses and one pint of corn off the cob. Put into a jar, cover with a cloth, set in the sun, and in three weeks you will have good vinegar.

**TOMATO MARMALADE.**—Pare and slice without wetting four pounds of unripe tomatoes; give them a slow boil for several hours until a large portion of the water has evaporated; add for each pound of tomatoes three-quarters of a pound of sugar and two sliced lemons. Boil for one hour longer.

**FRIED TOMATOES.**—Do not pare the tomatoes, cut in slices, roll in flour and fry in butter until both sides are brown, season with salt, pepper and a little sugar sprinkled over while cooking; or after the tomatoes are browned, stir into the gravy in the spider one cupful of cream thickened with flour. Let it boil up, and turn it over the tomatoes.

**MACARONI WITH TOMATOES.**—Remove from each tomato the pips and watery substance it contains; put the tomatoes in a saucepan with a small piece of butter, pepper, salt, thyme and a bay leaf, and a few teaspoonfuls of gravy or stock, keep stirring until they are reduced to a pulp, then strain through a sieve and pour over macaroni already boiled soft, and cover with grated cheese; bake until a light brown.

**PRESERVED QUINCES.**—Pare and quarter, taking out cores and all hard parts. Boil in clear water until tender, spread out to dry. Allow a half pound of sugar and one-third of a cup of water to a pound of fruit. When the syrup boils put in the fruit, set back on stove and cook very slowly for an hour or more if not too tender, as the longer it cooks the brighter will be the color. Put in jars as other fruit.

**AROMATIC MUSTARD.**—Upon one tablespoonful of grated horseradish, an ounce of bruised ginger root, and five long red peppers pour half a pint of boiling vinegar. Allow to stand, closely covered for two days; then take five teaspoonfuls of ground mustard, one teaspoonful of curry powder, and a dessertspoonful of salt, and mix well together. Strain the vinegar upon this, adding a dash of cayenne if wanted very pungent. Mix very smoothly and keep in a corked bottle or jar.

**DEVILED TOMATOES.**—Take two or three large firm tomatoes, not over-ripe, cut them in slices half an inch thick and lay on a sieve. Make a dressing of one tablespoonful of butter and one of vinegar rubbed smooth with the yolk of one hard-boiled egg; add a very little sugar, salt, mustard and cayenne pepper; beat until smooth and heat to a boil. Take from the fire and pour a well beaten egg, whipping to a smooth cream. Put the vessel containing this dressing in hot water while the tomatoes are being boiled over a clear fire. Put the tomatoes on a hot dish and pour the dressing over them.

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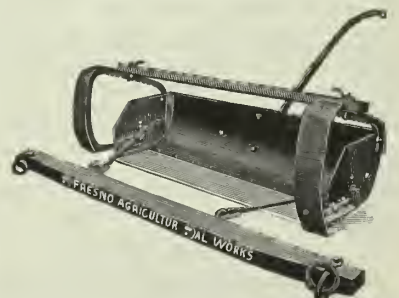
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## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Oct. 31, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

|                | Nov.            | Dec.            |
|----------------|-----------------|-----------------|
| Wednesday..... | 72 1/4 @ 71 1/4 | 73 1/4 @ 72     |
| Thursday.....  | 71 1/2 @ 72 1/2 | 72 1/2 @ 73 1/2 |
| Friday.....    | 72 1/2 @ 71 1/2 | 73 1/2 @ 72 1/2 |
| Saturday.....  | 71 1/2 @ 71 1/2 | 72 1/2 @ 72     |
| Monday.....    | 72 1/2 @ 71 1/2 | 73 1/2 @ 72 1/2 |
| Tuesday.....   | 72 @ 72 1/2     | 72 1/2 @ 73 1/2 |

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

|                | Dec.        | Feb.       |
|----------------|-------------|------------|
| Wednesday..... | 5s 11 1/2 d | 6s 0 1/2 d |
| Thursday.....  | 5s 11 1/2 d | 6s 0 1/2 d |
| Friday.....    | 5s 11 1/2 d | 6s 0 1/2 d |
| Saturday.....  | 5s 11 d     | 6s 0 d     |
| Monday.....    | 5s 11 1/2 d | 6s 0 1/2 d |
| Tuesday.....   | 5s 11 1/2 d | 6s 0 1/2 d |

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

|                | Dec., 1900.     | May, 1901.          |
|----------------|-----------------|---------------------|
| Thursday.....  | 98 1/4 @ 98 1/2 | 1 04 1/4 @ 1 05 1/4 |
| Friday.....    | 97 1/2 @ 97 1/2 | 1 03 1/4 @ 1 04     |
| Saturday.....  | — @ —           | 1 03 1/4 @ —        |
| Monday.....    | 97 1/2 @ —      | 1 04 1/4 @ 1 04     |
| Tuesday.....   | 97 1/2 @ 98 1/2 | 1 03 1/4 @ 1 05 1/4 |
| Wednesday..... | 99 @ 99 1/2     | 1 05 1/4 @ 1 06 1/4 |

## WHEAT.

The wheat market has been dragging along in anything but satisfactory fashion for the producing and selling interest. The demand locally has been so insignificant most of the time that there has been little opportunity to test values. The selling pressure was not great, but there is always some grain seeking a market, no matter how adverse the conditions. The quantity being urged to sale proves sufficient to satisfy the immediate very limited requirements, leaving holders no opportunity to dictate terms. This is almost invariably the case when ships are scarce. There were only eleven wheat clearances from this port during the month just closed, hardly three a week. If there had been double the number of clearances, and the quantity of wheat available would easily have made possible the larger movement, a much firmer market would in all probability have been experienced. The tendency on ocean freights is to easier figures, but no very pronounced reduction in grain charter rates is looked for in the near future, and the improvement in consequence to wheat will likely prove slight, unless a much better state of affairs is developed in foreign wheat markets than has lately existed. The United States visible supply of wheat east of the Rocky mountains was given at 59,773,000 bushels, an increase for the week of 1,480,000 bushels. This was lighter than anticipated. There was a little firmer feeling at the close, more noticeable in the prices of options than in spot values.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

|                                                                                                                                   |                       |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| December, 1900, delivery, 97 1/2 @ 99 1/2 c.                                                                                      |                       |
| May, 1901, delivery, \$1.03 1/4 @ 1.06 1/4.                                                                                       |                       |
| Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at 99 @ 99 1/2 c.; May, 1901, \$1.05 1/4 @ 1.06 1/4. |                       |
| California Milling.....                                                                                                           | \$1 02 1/4 @ 1 07 1/4 |
| Cal. No. 1 shipping, alongside.....                                                                                               | 93 1/2 @ 96 1/4       |
| Oregon Valley.....                                                                                                                | 93 1/2 @ 97 1/4       |
| Washington Blue Stem.....                                                                                                         | 1 00 @ 1 05           |
| Washington Club.....                                                                                                              | 1 00 @ 1 02 1/2       |
| Of qualities wheat.....                                                                                                           | 90 @ 92 1/4           |

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

|                      | 1899-1900.            | 1900-01.            |
|----------------------|-----------------------|---------------------|
| Liv. quotations..... | 6s 3 1/4 d @ 6s 4 d   | 6s 3 d @ 6s 5 d     |
| Freight rates.....   | 33 1/2 @ 36 1/4 s     | 42 1/4 @ 43 1/4 s   |
| Local market.....    | \$1 07 1/4 @ 1 08 1/2 | \$0 93 1/4 @ 97 1/4 |

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

In sympathy with wheat, this market showed weakness, sales of noteworthy magnitude at full current quotations being the exception. Stocks have been heavier than at present, but there is much more flour offering, both of local and outside product, than can be placed, even by making moderate concessions to buyers.

|                                |              |
|--------------------------------|--------------|
| Superfine, lower grades.....   | 82 25 @ 2 50 |
| Superfine, good to choice..... | 2 80 @ 2 80  |
| Country grades, extras.....    | 3 15 @ 3 40  |
| Choice and extra choice.....   | 3 40 @ 3 65  |
| Fancy brands, jobbing.....     | 3 60 @ 3 75  |
| Oregon, Bakers' extra.....     | 2 80 @ 3 25  |
| Washington, Bakers' extra..... | 2 90 @ 3 40  |

## BARLEY.

The market has not shown much activ-

ity since last review. Prices have remained quotably at about same range as last noted, and for choice to select qualities values have been tolerably well maintained at the prevailing figures. Little has been done in other than feed descriptions, the bulk of offerings being largely of this class. Trading in the speculative or Call Board market was light and fluctuations in prices of options were of small compass.

|                                 |                   |
|---------------------------------|-------------------|
| Feed, No. 1 to choice.....      | 70 @ 72 1/2       |
| Feed, fair to good.....         | 65 @ 67 1/2       |
| Brewing, No. 1 to choice.....   | 80 @ 85           |
| Chevalier, No. 1 to choice..... | 97 1/2 @ 1 02 1/2 |
| Chevalier, No. 2.....           | 85 @ 90           |
| Chevalier, poor.....            | 70 @ 75           |

## OATS.

There are no very heavy quantities arriving, and especially are White Oats in light receipt, most of the recent arrivals having been Reds and Blacks, and a considerable proportion of these had been previously placed. Values are being well maintained, especially for best qualities, at the comparatively high range of values current.

|                               |                     |
|-------------------------------|---------------------|
| White Oats, fancy feed.....   | 1 37 1/2 @ 1 42 1/2 |
| White, good to choice.....    | 1 30 @ 1 35         |
| White, poor to fair.....      | 1 20 @ 1 27 1/2     |
| Gray, common to choice.....   | 1 20 @ 1 32 1/2     |
| Milling.....                  | 1 35 @ 1 42 1/2     |
| Surprise, good to choice..... | 1 40 @ 1 45         |
| Black Russian.....            | 1 12 1/2 @ 1 25     |
| Red.....                      | 1 15 @ 1 32 1/2     |

## CORN.

Market continues to be lightly stocked, with present supplies principally Eastern product, and representing in the main purchases made prior arrival. Business is necessarily of slim proportions. Market is steady for large corn, but easier for Small Yellow.

|                                      |                 |
|--------------------------------------|-----------------|
| Large White, good to choice.....     | 1 22 1/2 @ 1 25 |
| Large Yellow.....                    | 1 20 @ 1 27 1/2 |
| Small Yellow.....                    | 1 40 @ —        |
| Eastern, in bulk (carload lots)..... | 1 14 @ 1 17     |

## RYE.

Little doing in this cereal. While there is no firmness to record, offerings are not heavy at current rates.

|                          |                 |
|--------------------------|-----------------|
| Good to choice, new..... | 87 1/2 @ 92 1/2 |
|--------------------------|-----------------|

## BUCKWHEAT.

In the absence of offerings, values are poorly defined. Quotations are based on figures named by local millers.

|                     |             |
|---------------------|-------------|
| Good to choice..... | 1 75 @ 2 00 |
|---------------------|-------------|

## BEANS.

The market has developed additional strength since last review, especially for Lady Washingtons, most of the Eastern shipping demand recently experienced having been for this variety. Lady Washingtons or Large Whites are now held close to the 3c mark, and are nearing higher price nominally current for Small Whites and Pea beans. The latter are not obtainable here in great quantity at any figure. Limas are in light stock and are ruling very steady. Business in colored beans is mostly in Bayos and Pinks, with market firm for choice, the average quality of present offerings not being of high grade.

|                                  |             |
|----------------------------------|-------------|
| Pea, fair to good, 100 lbs.....  | 3 75 @ 4 00 |
| Small White, good to choice..... | 3 85 @ 4 00 |
| Lady Washington.....             | 2 85 @ 3 00 |
| Butter.....                      | 4 00 @ 4 50 |
| Pinks.....                       | 2 15 @ 2 30 |
| Bayos, good to choice.....       | 2 50 @ 2 75 |
| Reds.....                        | 2 50 @ 2 75 |
| Limas, good to choice.....       | 5 15 @ 5 30 |
| Black-eye Beans.....             | 3 00 @ 3 25 |
| Horse Beans.....                 | 1 75 @ 2 00 |
| Garbanzos, large.....            | 2 00 @ 2 25 |
| Garbanzos, small.....            | 1 25 @ 1 75 |

Advices by recent mail from New York give the following review of the Bean market, prices quoted being per 60-pound bushel:

We have had another week of active trading, short supplies and very firm prices. The slight increase in receipts was sufficient to meet urgent requirements, and the absorption of the stock put the market entirely in sellers' hands. Realizing that present values are high, there was no disposition to take all the advantage which the situation might offer, and throughout operators have been as conservative as possible. Marrow have sold very easily at \$2.50, and close firm at that; much of the time buyers have been compelled to engage stock to arrive in order to get supplies. Medium advanced to \$2.20 under a very great scarcity, and while choice Peas have gone mainly at \$2.10, there is a little disposition to ask more at the close; everything has been picked up as soon as it was offered. A few lots of new Red Kidney have come in this week, and with several export orders in hand, shippers were forced to pay \$2.55 @ 2.60 for them; these figures seem very extreme, however, and a decline is liable to occur at any time. Old Reds have ruled quiet, the demand running largely on new stock. But few White Kidney here. Yellow Eye held a little stronger. Small lots of Turtle Soup selling at \$1.85. California Lima have sold very well, but the feeling at

times has been a shade easier; quotable at \$3.57 1/2 @ 3.60. Green and Scotch Peas in only moderate demand and closing somewhat weaker.

## DRIED PEAS.

Values are quotably unchanged. There are few of domestic product offering, but local millers are fairly stocked for the time being with Eastern.

|                             |             |
|-----------------------------|-------------|
| Green Peas, California..... | 2 50 @ 2 75 |
| Niles Peas.....             | 1 90 @ 2 00 |

## WOOL.

Not much business has been transacted the current week, but there has been considerable inquiry and sampling, both in the interest of Eastern and local operators, which encourages the belief that there will be some activity at an early day. Such transfers as are effected warrant continuing former quotations.

## SPRING.

|                                      |         |
|--------------------------------------|---------|
| Humboldt and Mendocino.....          | 16 @ 17 |
| Northern, free.....                  | 14 @ 15 |
| Northern, defective.....             | 12 @ 13 |
| Middle Counties, free.....           | 14 @ 15 |
| Middle Counties, defective.....      | 11 @ 13 |
| Southern, 12 mos.....                | 8 @ 10  |
| Southern, free, 7 mos.....           | 9 @ 11  |
| Southern, defective, 7 mos.....      | 8 @ 9   |
| Oregon Valley, fine.....             | 17 @ 18 |
| Oregon Valley, coarse to medium..... | 16 @ 17 |
| Eastern Oregon, choice.....          | 13 @ 16 |
| Eastern Oregon, fair to good.....    | 10 @ 12 |
| Nevada, as to condition.....         | 11 @ 15 |

## FALL.

|                        |        |
|------------------------|--------|
| Middle County.....     | 9 @ 10 |
| San Joaquin.....       | 7 @ 9  |
| San Joaquin Lambs..... | 8 @ 9  |

## HOPS.

There are not many hops offering in this center, neither could very many be placed at current rates. Most of the quotations now being given out are more in accord with prices asked by dealers than with wholesale values. It is the exception where hops from first hands can be placed at over 14c, and the quality must be first-class to command this figure.

Good to choice 1900 crop..... 12 @ 15

The following review of the Hop market, coming forward by mail of late date, is from a New York authority:

There has been quite an increase in the receipts this week, but the bulk of the stock has come from the Pacific coast, and more than 1500 bales were on through bills of lading for English markets. Up in this State there is still a shortage of sacking and the inability to bale the hops is delaying the movement of the crop. There has been some buying in the interior of late and at slightly firmer prices, say 14 @ 16c, with special lots in the more favorite sections commanding more money. Considerable activity is reported on the Pacific coast and as high as 16c. has been paid within a day or two. Both mail and cable advices from England have reported increasing firmness, but only a moderate trade; brewers are carrying good stocks of 1899 hops and seem reluctant to take hold of the new hops at the prices asked. German markets are quite strong. Here in New York business has improved a little; brewers are showing more interest and an occasional purchase is made by shippers. Prices have hardened a little, and choice lots of both State and Pacific coast are quotable at 18 @ 18 1/2 c. For yearlings and other hops the demand is light.

## HAY AND STRAW.

Values for hay are being, as a rule, well maintained at previously quoted range, about the only exception being Volunteer, which is not moving readily, there having been no active request for this description at any date the current season. The quantity of hay now coming forward is not heavy. Straw is in very moderate supply and in fair request at full current rates.

|                      |              |
|----------------------|--------------|
| Wheat.....           | 9 00 @ 13 50 |
| Wheat and Oat.....   | 9 00 @ 12 50 |
| Oat.....             | 8 00 @ 12 50 |
| Barley.....          | 7 00 @ 9 00  |
| Volunteer.....       | 6 00 @ 7 50  |
| Alfalfa.....         | 7 00 @ 8 50  |
| Stock.....           | 5 50 @ 7 00  |
| Compressed.....      | 9 00 @ 13 00 |
| Straw, 1/2 bale..... | 35 @ 45      |

## MILLSTUFFS.

Bran arrived more sparingly than during preceding week, but supplies were ahead of the demand at the ruling figures, and market inclined downwards. Middlings and Shorts were quotably unchanged; demand and supplies were both of slim proportions. Rolled Barley ruled quiet. Milled Corn was in light supply and was not crowded to sale.

|                     |               |
|---------------------|---------------|
| Bran, 1/2 ton.....  | 15 00 @ 16 00 |
| Middlings.....      | 16 50 @ 20 00 |
| Shorts, Oregon..... | 16 00 @ 17 00 |
| Barley, Rolled..... | 15 50 @ 16 00 |
| Cormeal.....        | 26 00 @ —     |
| Cracked Corn.....   | 27 00 @ —     |

## SEEDS.

Business in this department is of a light order at present, more the result of absence of noteworthy offerings than any other cause. Values remain nominally

the same as last stated. Alfalfa is too scarce to quote. Stocks of Mustard Seed are extremely light.

|                       | Per ctt.    |
|-----------------------|-------------|
| Mustard, Trieste..... | — @ —       |
| Mustard, Yellow.....  | — @ —       |
| Flax.....             | 2 00 @ 2 50 |
|                       | Per lb.     |
| Canary.....           | 3 1/4 @ 4   |
| Rape.....             | 2 @ 3       |
| Hemp.....             | 3 1/4 @ 4   |

## BAGS AND BAGGING.

Calcutta Grain Bags are being offered for next season's delivery, but at higher rates than were current last winter; there is no evidence of buyers taking hold to any noteworthy extent. In other bags and bagging there are no changes to record in quotable values, but trading is very light.

|                                             |               |
|---------------------------------------------|---------------|
| Calcutta Grain Bags, buyer June-July.....   | 6 1/4 @ 6 1/2 |
| Calcutta Grain Bags, spot.....              | 5 1/2 @ —     |
| San Francisco Grain Bags, 22x36, spot.....  | 5 1/2 @ 5 1/2 |
| State Prison Bags in lots of 2000, 100..... | — @ —         |
| Wool Sacks, 4 lbs.....                      | — @ 23 1/2    |
| Wool Sacks, 3 1/2 lbs.....                  | — @ 23 1/2    |
| Fleece Twine.....                           | 7 1/2 @ —     |
| Gunnies.....                                | — @ 12 1/2    |
| Bean Bags.....                              | 4 1/2 @ 5 1/4 |
| Fruit Sacks, cotton.....                    | 6 1/4 @ 7 1/4 |

## HIDES, PELTS AND TALLOW.

A slightly improved feeling is observable in the Hide market, but not sufficient to warrant an advance in quotations. Pelts are barely steady. Tallow is in fair request for export at prevailing rates.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

|                                     | Sound. | Culls. |
|-------------------------------------|--------|--------|
| Heavy Steers, over 56 lbs.....      | 9      | 8      |
| Medium Steers, 48 to 56 lbs.....    | 8½     | 7½     |
| Light Steers, under 48 lbs.....     | 8      | 7      |
| Heavy Cow Hides, over 50 lbs.....   | 8      | 7      |
| Light Cow Hides, under 50 lbs.....  | 8      | 7      |
| Wet Salted Kip.....                 | 8      | 7      |
| Wet Salted Veal.....                | 8      | 7      |
| Wet Salted Calf.....                | 9      | 8      |
| Dry Hides.....                      | 15     | 12     |
| Dry Kip and Veal, 11 to 16 lbs..... | 15     | 12     |
| Dry Calf, under 4 lbs.....          | 15     | 12     |
| Salted Horse Hides, large.....      | 2 00 @ | —      |
| Salted Horse Hides, medium.....     | 1 50 @ | —      |
| Salted Horse Hides, small.....      | 1 00 @ | —      |
| Dry Horse Hides, large.....         | 1 50 @ | —      |
| Dry Horse Hides, small.....         | 75 @   | 1 00   |
| Dry Colts' Hides.....               | 50 @   | —      |
| Pelts, long wool, ¾ skin.....       | 75 @   | 1 00   |
| Pelts, medium, ¾ skin.....          | 50 @   | 70     |
| Pelts, short wool, ¾ skin.....      | 30 @   | 40     |
| Pelts, shearling, ¾ skin.....       | 15 @   | 25     |
| Deer Skins, best summer.....        | 27½ @  | 30     |
| Deer Skins, good medium.....        | 20 @   | 22½    |
| Deer Skins, thin winter.....        | — @    | 10     |
| Elk Hides.....                      | 10 @   | 12     |
| Tallow, good quality.....           | 4 @    | —      |
| Tallow, No. 2.....                  | 3 @    | 3½     |
| Goat Skins, perfect.....            | 30 @   | 37½    |
| Goat Skins, damaged.....            | 10 @   | 20     |
| Kid Skins.....                      | 5 @    | 10     |

## HONEY.

There would be considerable activity in this article if stocks were obtainable in greater quantity at or near the values now ruling. Supplies are too small, however, to admit of much movement. Present offerings are mostly of Amber grades and a rather large proportion is Comb.

|                              |                 |
|------------------------------|-----------------|
| Extracted, White Liquid..... | 7 1/2 @ 8       |
| Extracted, Light Amber.....  | 6 1/2 @ 7 1/2   |
| Extracted, Amber.....        | 5 1/2 @ 6 1/2   |
| White Comb, 1 lb frames..... | 13 @ 14         |
| Amber Comb.....              | 11 1/2 @ 12 1/2 |
| Dark Comb.....               | 8 @ 9           |

## BEESWAX.

Buyers are much more readily found than sellers. Market is firm, with every prospect of so continuing this season.

|                                    |         |
|------------------------------------|---------|
| Good to choice, light, 1/2 lb..... | 26 @ 28 |
| Dark.....                          | 24 @ 25 |

## LIVE STOCK AND MEATS.

Beef is in good request at current figures. Market for Mutton is ruling steady, with no excess of offerings. Tendency on Small Veal was to firmer prices, arrivals being light. Hog market showed a little better tone, there being a good demand at existing rates, both for packing and immediate use.

|                                               |               |
|-----------------------------------------------|---------------|
| Beef, first quality, dressed, net 1/2 lb..... | 6 @ 6 1/2     |
| Beef, second quality.....                     | 5 1/2 @ 6     |
| Beef, third quality.....                      | 5 @ —         |
| Mutton—ewes, 6 1/2 @ 7c; wethers.....         | 7 @ 7 1/2     |
| Hogs, hard grain fed, medium.....             | 5 1/2 @ 5 1/2 |
| Hogs, small, fat.....                         | 5 1/2 @ 5 1/2 |
| Hogs, large, hard.....                        | 5 1/2 @ —     |
| Hogs, feeders.....                            | 5 @ 5 1/2     |
| Hogs, country dressed.....                    | 6 1/2 @ 7     |
| Veal, small, 1/2 lb.....                      | 6 @ 9         |
| Veal, large, 1/2 lb.....                      | 7 1/2 @ 8 1/2 |
| Lamb, spring, 1/2 lb.....                     | 8 @ 8 1/2     |

## POULTRY.

While domestic poultry was not in heavy receipt, it failed to command what could be termed good figures, owing to continued free offerings of Eastern and the comparatively low prices ruling on the latter. Many of the city poulterers and consumers give Eastern Chickens the preference, owing to the imported averaging larger than domestic. Dressed Turkeys are beginning to arrive, but so far have



not received much attention; in a week or two they will be in better request.

|                               |      |          |
|-------------------------------|------|----------|
| Turkeys, live hens, # lb.     | 14   | @ 15     |
| Turkeys, live gobblers, # lb. | 14   | @ 15     |
| Turkeys, Old, per lb.         | 11   | @ 12 1/2 |
| Hens, California, # dozen     | 3 50 | @ 4 50   |
| Roosters, old.                | 3 50 | @ 4 00   |
| Roosters, young (full-grown). | 3 50 | @ 4 00   |
| Fryers.                       | 3 00 | @ 3 50   |
| Broilers, large.              | 3 00 | @ 3 50   |
| Broilers, small.              | 2 50 | @ 3 00   |
| Ducks, old, # dozen           | 3 00 | @ 4 00   |
| Ducks, young, # dozen         | 3 50 | @ 5 00   |
| Geese, # pair                 | 1 50 | @ 1 75   |
| Goslings, # pair              | 1 75 | @ 2 00   |
| Pigeons, old, # dozen         | 1 00 | @ —      |
| Pigeons, young                | 1 50 | @ 1 75   |

#### BUTTER.

Values for fresh have been again marked down and are now so close to packed that they will probably show more steadiness. If the trade generally was running on fresh, there would not be enough to go around, but the extensive use at present of cold storage and packed butter is operating against the advantageous sale of fresh in anything like wholesale fashion. A few marks are in a small way selling above quotations.

|                                       |    |      |
|---------------------------------------|----|------|
| Creamery, extras, # lb.               | 24 | @ 25 |
| Creamery, firsts.                     | 23 | @ 24 |
| Creamery, seconds.                    | 21 | @ 22 |
| Dairy, select.                        | 22 | @ 23 |
| Dairy, seconds.                       | 20 | @ 21 |
| Dairy, soft and weedy.                | —  | @ —  |
| Mixed store.                          | 16 | @ 17 |
| Creamery in tubs.                     | 20 | @ 22 |
| Pickled Roll.                         | 20 | @ 21 |
| Firkin, California, choice to select. | 20 | @ 21 |
| Firkin, common to fair.               | 17 | @ 18 |

#### CHEESE.

The market has been showing a little more activity, but no changes have been established in quotable rates. Strictly fancy new, however, commands in a retail way slightly higher figures than are quotable, this description being offered sparingly.

|                              |       |          |
|------------------------------|-------|----------|
| California, fancy flat, new. | 11    | @ 12     |
| California, good to choice.  | 10    | @ 11     |
| California, fair to good.    | 9 1/2 | @ 10     |
| California Cbeeddar.         | —     | @ —      |
| California, "Young Americas" | 10    | @ 12 1/2 |

#### EGGS.

There is a peculiar condition of affairs existing in the Egg market at present. Fancy fresh are quoted up to 45c. in a wholesale or jobbing way, but sales at this figure are few and far between. The price has been forced up in the interest of a large number of retailers who are reaping a harvest by selling selected Eastern for best domestic. Eastern and cold storage Eggs are in liberal stock.

|                                             |        |      |
|---------------------------------------------|--------|------|
| California, select, large, white and fresh. | 42 1/2 | @ —  |
| California, select, irregular color & size. | 35     | @ 40 |
| California, good to choice store.           | 25     | @ 30 |
| Eastern, as to section and grading.         | 20     | @ 25 |
| Eastern, cold storage.                      | —      | @ —  |

#### VEGETABLES.

A noteworthy feature of the market was the stiffer prices for Onions, this vegetable being in active request, both for shipment and on speculative account. Tomato market was easier, canners having stopped purchasing. Peas and Beans were in light receipt and favored sellers. Garlic remains scarce and high.

|                                    |       |        |
|------------------------------------|-------|--------|
| Beans, String, # lb.               | 3     | @ 5    |
| Beans, Wax, # lb.                  | —     | @ —    |
| Beans, Lima, # lb.                 | 3     | @ 5    |
| Cabbage, choice garden, # 100 lbs. | 1 00  | @ 1 25 |
| Cauliflower, # dozen               | 50    | @ —    |
| Cucumbers, Bay, # box.             | 35    | @ 60   |
| Egg Plant, # box.                  | 30    | @ 60   |
| Garlic, # lb.                      | 4 1/2 | @ 5    |
| Onions, Yellow Danver, # cental.   | 85    | @ 1 10 |
| Okra, Green, # box.                | 40    | @ 60   |
| Peas, Sweet, garden, # lb.         | 3 1/2 | @ 5    |
| Peppers, Green Chile, # box.       | 30    | @ 60   |
| Peppers, Bell, # lb.               | 35    | @ 65   |
| Squash, Summer, # large box.       | 75    | @ 1 00 |
| Tomatoes, River, # large box.      | 30    | @ 60   |

#### POTATOES.

Choice to select Potatoes were not in heavy stock, and were in fair request, market ruling moderately firm. Common qualities continued in excessive supply, selling slowly at low figures, being wholly avoided by most buyers. Sweets were plentiful and market favored buyers.

|                                   |    |        |
|-----------------------------------|----|--------|
| Burbanks, River, # cental.        | 30 | @ 65   |
| Burbanks, Petaluma-Tomales.       | 35 | @ 65   |
| Burbanks, Salinas, # cental.      | 85 | @ 1 15 |
| Burbanks, Oregon, # cental.       | 55 | @ 90   |
| Sweet Potatoes, Yellow, # cental. | 75 | @ 1 00 |

#### The Fruit Market.

##### FRESH FRUITS.

Apple market is in bad shape, which is readily accounted for, being glutted with common and inferior qualities. San Francisco is made the dumping ground of nearly all the trashy stock in the State, and so long as this continues the market need not be expected to show healthy or satisfactory condition. Good to select, especially the latter, are selling fairly well. Strictly choice will more readily command extreme quotations than some of the most common will bring the lowest figures below named. Pears sold at about same

range last quoted, with demand not very brisk and inquiry mostly for fine Winter Nels. Grapes were in fair supply, but only a small proportion showed desirable quality; other than prime to choice were neglected. Straw and Raspberries were in very light receipt, as is to be expected at this date; the demand for them was also light. Pomegranates move slowly. Persimmons offering are in the main too hard to be much sought after.

|                                      |       |         |
|--------------------------------------|-------|---------|
| Apples, fancy, 4-tier box.           | 1 00  | @ 1 25  |
| Apples, good to choice, # 50-lb box. | 60    | @ 90    |
| Apples, common to fair, # 50-lb box. | 25    | @ 50    |
| Cantaloupes, # crate.                | —     | @ —     |
| Grapes, Tokay, # box.                | 30    | @ 65    |
| Grapes, Black, # box.                | 30    | @ 65    |
| Grapes, Zinfandel, per ton.          | 20 00 | @ 25 00 |
| Grapes, Muscat, # box.               | 30    | @ 65    |
| Raspberries, # chest.                | 5 00  | @ 7 00  |
| Nutmeg Melons, # crate.              | —     | @ —     |
| Plums, Coe's Late Red, # box.        | —     | @ —     |
| Pears, Winter Nels, # box.           | 50    | @ 1 00  |
| Pears, common kinds, # box.          | 30    | @ 75    |
| Persimmons, # box.                   | 40    | @ 75    |
| Pomegranates, # box.                 | 50    | @ 1 00  |
| Quinces, # box.                      | 40    | @ 75    |
| Strawberries, Longworth, # chest.    | —     | @ —     |
| Strawberries, Large, # chest.        | 3 50  | @ 6 00  |
| Whortleberries, # lb.                | 5     | @ 6     |
| Watermelons, # 100.                  | —     | @ —     |

#### DRIED FRUITS.

Another dull week has been experienced in the market for cured and evaporated fruits, at least so far as trading in offerings from first hands is concerned, and as is generally the case when dullness prevails, the market has been against sellers. Packers and jobbers have been doing a moderate business, but almost wholly out of stocks previously purchased or contracted for. Quotable values are much the same as last noted, but are largely nominal for the time being. With the single exception of Apricots, which are in light stock and are practically all out of first hands, the entire line of deciduous dried fruits is lacking in strength. Pears show perhaps the most weakness, especially common qualities, which range down to 3c., although there are fancy on market which could not be secured under 7c. Peaches are about as unfavorable to sellers as Pears, with the range in values nearly as wide, being from 3 1/2c. for common sun-dried to 6 1/2c. for fancy evaporated, and there are some extra select held above the last quoted figure. Apples are offering at reduced rates and are meeting with very little custom, aside from the filling of small orders by jobbers. Prunes continue to sell at irregular prices, non-Association stocks being still on market in sufficient quantity to enable the filling of orders of moderate proportions. A generally improved condition of affairs in the dried fruit trade is looked for after the election, and not much patient waiting need now be exercised to ascertain whether or not the anticipation will be realized.

##### EVAPORATED OR BLEACHED.

|                                                      |       |          |
|------------------------------------------------------|-------|----------|
| Apricots, Royal, prime.                              | 6 1/2 | @ 7      |
| Apricots, Royal, choice, in sacks, # lb.             | 7 1/2 | @ 8      |
| Apricots, Royal, fancy.                              | 9     | @ —      |
| Apricots, Moorpark.                                  | 9 1/2 | @ 11 1/2 |
| Apples, in 50-lb boxes, rings, pressed, fancy.       | 5 1/2 | @ 5 1/2  |
| Apples, 50-lb boxes, rings, pressed, good to choice. | 4 1/2 | @ 4 1/2  |
| Figs, White, fancy pressed.                          | 6     | @ 7      |
| Nectarines, # lb.                                    | 4     | @ 6      |
| Peaches, unpeeled, fancy.                            | 6     | @ 6 1/2  |
| Peaches, unpeeled, choice.                           | 5     | @ 5 1/2  |
| Peaches, peeled, in boxes.                           | 11    | @ 14     |
| Pears, unpeeled Bartlett's, halved, fancy.           | 6     | @ 6 1/2  |
| Pears, halved, unpeeled Bartlett's.                  | 5     | @ 5 1/2  |
| Pears, quartered, unpeeled Bartlett's.               | 4 1/2 | @ 5 1/2  |
| Plums, Black, pitted.                                | 4 1/2 | @ 5 1/2  |
| Plums, White and Red.                                | 5 1/2 | @ 6 1/2  |
| Prunes, Silver.                                      | 4 1/2 | @ 6      |

##### COMMON SUN-DRIED.

|                    |       |         |
|--------------------|-------|---------|
| Apples, sliced.    | 2 1/2 | @ 3     |
| Apples, quartered. | 2 1/2 | @ 3 1/2 |
| Figs, Black.       | 2     | @ 2 1/2 |
| Figs, White.       | 3     | @ 3 1/2 |
| Peaches, unpeeled. | 4     | @ 5     |

Prices for new crop Prunes, as named by the

California Cured Fruit Association: Santa Clara four sizes, 3c. per lb.; 40-50s, 7c.; 50-60s, 5 1/2c.; 60-70s, 3 1/2c.; 70-80s, 3 1/2c.; 80-90s, 2 1/2c.; 90-100s, 2 1/2c.; 100-120s, 2c., which is the uniform price for this grade; Sonomas, other than smallest, 1/2c. less; other districts, 1/2c. less, except for smallest; Ruby, 1/2c. premium.

#### RAISINS.

The market shows healthy condition, there being a good inquiry at prevailing figures. Spot stocks are principally 3-crown loose Muscatels and London layers. Thompson's Seedless, Sultan and Seedless Raisins are commanding above quotations and are in exceedingly light supply. The prospects for a clean-up before the close of the season of this year's output of Muscatels at full current rates is quite promising.

##### F. O. B. FRESNO DELIVERY.—CARLOAD LOTS.

|                                          |      |     |
|------------------------------------------|------|-----|
| Imperial Clusters, 6-crown, # 20-lb box. | 3 00 | @ — |
| Dehesa Clusters, 5-crown.                | 2 50 | @ — |
| Fancy Clusters, 4-crown.                 | 2 00 | @ — |
| London Layers, 3-crown, # box.           | 1 60 | @ — |
| do do 2-crown, # box.                    | 1 50 | @ — |

(Usual advance for fractions.)

|                                         |   |         |
|-----------------------------------------|---|---------|
| Loose Muscatel, 4-crown standard, # lb. | — | @ 7     |
| Loose Muscatel, 3-crown.                | — | @ 6 1/2 |
| Loose Muscatel, 2-crown standard.       | — | @ 6     |
| Loose Muscatel, seedless.               | — | @ 6 1/2 |

(Above prices for loose raisins are for 50-lb boxes.)

Thompson Seedless.—Bleached fancy, # lb., 12c; choice, 11c; standard, 10c; prime, 9c. Unbleached, 9c.

Sultanas.—Bleached fancy, # lb., 10 1/2c; choice, 9 1/2c; standard, 8 1/2c; prime, 8c. Unbleached, 8c.

#### CITRUS FRUITS.

There are not many Oranges, either new, old or intermediate crop on market, neither has any active inquiry so far developed. In a few weeks, with choicer stocks and a better opportunity to make selections, it is likely there will be a much better demand. Lemons remain in heavy supply, mostly defective stock, for which market is weak; choice are in a small way commanding fair figures. Limes are offering at previously quoted easy rates.

|                                   |      |        |
|-----------------------------------|------|--------|
| Oranges—Navel, # box.             | 2 50 | @ 4 50 |
| Valencia, # box.                  | 3 00 | @ 4 00 |
| Seedlings, # box.                 | 2 00 | @ 2 50 |
| Lemons—California, select, # box. | 2 50 | @ 2 75 |
| California, good to choice.       | 1 75 | @ 2 25 |
| California, common to fair.       | 75   | @ 1 50 |
| Limes—Mexican, # box.             | 4 00 | @ 4 50 |
| California, small box.            | 50   | @ 75   |

#### NUTS.

In Almonds there is not much doing and for other than choice the market cannot be termed firm. Values for prime to choice Walnuts are being well sustained, with prospects good for a speedy clean-up of stocks at full current rates.

|                                        |        |          |
|----------------------------------------|--------|----------|
| California Almonds, shelled.           | 24     | @ 27     |
| California Almonds, paper shell, # lb. | 13     | @ 15     |
| California Almonds, soft shell.        | 10 1/2 | @ 12 1/2 |
| California Almonds, hard shell.        | 7      | @ 8      |
| Walnuts, White, soft shell.            | 8 1/2  | @ 10 1/2 |
| Walnuts, White, California, standard.  | 7 1/2  | @ 10     |
| Chestnuts, California Italian.         | 6      | @ 8      |
| Peanuts, California, fair to prime.    | 5      | @ 6      |
| Peanuts, Eastern, hand-picked.         | 6      | @ 6 1/2  |
| Pine Nuts.                             | 5      | @ 6      |

#### WINE.

Prices for new Wine have not yet been established, so as to enable giving quotations. The Wine Dealers' Association has been a heavy purchaser of grapes this season, leaving the quantity of Wine in the hands of growers of unusually small proportions. As soon as values are determined they will be announced in this column. The Panama steamer sailing Monday took 120,050 gallons and 227 cases Wine, the greater portion being destined for New York. The bark Strathdon, clearing Monday for London, carried as part cargo 15,000 gallons and 6 cases Wine. Late advices report sales of new dry wines in Napa at 16@18c., in cellar, latter figure for choice mountain.

#### Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

| FOR THE WEEK.    | Since July 1, 1900. | Same time last year. |
|------------------|---------------------|----------------------|
| Flour, # sacks.  | 115,344             | 1,931,024            |
| Wheat, centals.  | 208,574             | 1,859,724            |
| Barley, centals. | 36,750              | 1,988,568            |
| Oats, centals.   | 17,300              | 353,680              |
| Corn, centals.   | 4,640               | 29,685               |
| Rye, centals.    | 730                 | 62,087               |
| Beans, sacks.    | 47,566              | 105,571              |
| Potatoes, sacks. | 38,956              | 526,242              |
| Onions, sacks.   | 5,106               | 96,153               |
| Hay, tons.       | 3,016               | 74,867               |
| Wool, bales.     | 770                 | 16,355               |
| Hops, bales.     | 393                 | 4,535                |

#### EXPORTS BY SEA.

| FOR THE WEEK.      | Since July 1, 1900. | Same time last year. |
|--------------------|---------------------|----------------------|
| Flour, # sacks.    | 4,184               | 911,564              |
| Wheat, centals.    | 189,409             | 1,719,078            |
| Barley, centals.   | 15,411              | 1,255,364            |
| Oats, centals.     | 2                   | 40,681               |
| Corn, centals.     | 301                 | 6,062                |
| Hay, bales.        | 16,696              | 74,023               |
| Wool, pounds.      | 233,621             | 1,131,048            |
| Hops, pounds.      | 236,261             | 351,995              |
| Honey, cases.      | 1,460               | 2,424                |
| Potatoes, packages | 48                  | 27,359               |

#### California Dried Fruit at New York.

NEW YORK, Oct. 31.—Evaporated apples, common, 3@4c; prime wire tray, 4 1/2@5 1/2c; choice, 5 1/2@6c; fancy, 6@8 1/2c.

California dried fruits.—Market is inactive, with values nominally as last quoted.

Prunes, 3 1/2@8 1/2c.

Apricots, Royal, 11@14c; Moorpark, 15@17c.

Peaches, unpeeled, 6@9c; peeled, 16@20c.

#### OF VALUE TO HORSEMEN.

Horses steadily at work, either on the farm or road, may have had some strains whereby lameness or enlargements have been caused. Or perhaps new life is needed to be infused into their legs. Gombault's Caustic Balsam, applied as per directions, will be of benefit. One advantage in using this remedy is that after it is applied it needs no care or attention, but does its work well. Of course, it can be used with equal success any time and many people would use Caustic Balsam if they were reminded of it.

#### MOORE, FERGUSON & CO.

WOOL, GRAIN, FLOUR

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Leading Dip of the World Sixty Years.

USED ON 150,000,000 YEARLY.

Not a refuse product of tobacco or dye factories. A sheep dip invented and made specially for sheep. You are asked to use it because it is the best. It occupies a supreme position in all countries. It is free from objections so common in others. It cures without injury. No smell.

General Agents, SHOOBERT-BEAL CO., 222 SANSOME ST., SAN FRANCISCO.

#### Improved Fresno Scraper.

5-FOOT. WEIGHT, 300 LBS.

NEW STOCK. NEW PRICES.



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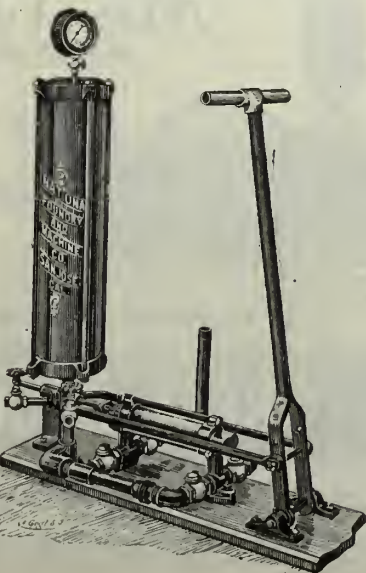
#### Apple Seedlings.

We offer the following grades: First-class, 3-16 inch and up, straights. Second class, 2-16 to 3-16 inch, straights. Branched, 2-16 inch and up. These Seedlings are equal to any on the market, and offered at reasonable prices. We also have a large stock of Root Grafts. Address F. S. PHOENIX, Bloomington, Ill.

#### Prune Dip.

"Greenbank" Powdered Caustic Soda and Pure Potash.

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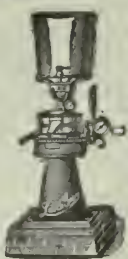
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### Population of California.

WASHINGTON, October 25.—The detailed account of the population of the State of California was announced by the Census Bureau yesterday afternoon.

The population of the State in 1900 is 1,485,053, as against 1,208,130 in 1890, representing an increase since 1890 of 276,923, or 22.9%. A small portion of this increase is due to the fact that there were 5107 Indians and 161 other persons, or a total of 5268 persons, on Indian reservations, etc., in California who were specially enumerated in 1890 under the provisions of the Census Act, but were not included in the general population of the State at the census.

The population of the State in 1850 was 92,592, and from 1850 to 1860 it increased 287,397, or 310.3%, showing a total population in 1860 of 379,994. During the decade from 1860 to 1870 the increase was only 180,253, or 47.4%, but for each of the three succeeding decades the numerical increase has been much greater, though the percentage of increase for the last two decades has declined.

The population of California in 1900 is more than sixteen times as large as that given for 1850, the first census in which the population of the State appears.

The total land surface of California is approximately 155,980 square miles, the average number of persons to the square mile at the census of 1890 and 1900 being as follows: 1890, 7.7; 1900, 9.5.

The population of the State by counties is as follows:

|                | 1900.   | 1890.   |
|----------------|---------|---------|
| Alameda        | 130,190 | 83,864  |
| Alpine         | 509     | 667     |
| Amador         | 11,116  | 10,320  |
| Butte          | 17,117  | 17,839  |
| Calaveras      | 11,200  | 8,882   |
| Colusa         | 7,346   | 14,640  |
| Contra Costa   | 18,046  | 13,515  |
| Del Norte      | 2,408   | 5,902   |
| El Dorado      | 8,986   | 9,232   |
| Fresno         | 37,862  | 32,026  |
| Glenn          | 5,510   |         |
| Humboldt       | 27,104  | 23,469  |
| Inyo           | 4,377   | 3,544   |
| Kern           | 16,480  | 9,808   |
| Kings          | 9,891   |         |
| Lake           | 6,107   | 7,101   |
| Lassen         | 4,551   | 4,239   |
| Los Angeles    | 170,298 | 101,454 |
| Madera         | 6,634   |         |
| Marin          | 15,720  | 13,702  |
| Mariposa       | 4,720   | 3,787   |
| Mendocino      | 20,465  | 17,612  |
| Merced         | 9,125   | 8,085   |
| Modoc          | 5,076   | 4,986   |
| Mono           | 2,167   | 2,002   |
| Monterey       | 19,380  | 18,637  |
| Napa           | 16,451  | 16,411  |
| Nevada         | 17,789  | 17,369  |
| Orange         | 19,696  | 13,589  |
| Placer         | 15,786  | 15,101  |
| Plumas         | 4,657   | 4,933   |
| Riverside      | 17,897  |         |
| Sacramento     | 45,915  | 40,339  |
| San Benito     | 6,633   | 6,412   |
| San Bernardino | 27,929  | 25,495  |

|                 |         |         |
|-----------------|---------|---------|
| San Diego       | 35,090  | 34,987  |
| San Francisco   | 342,782 | 298,997 |
| San Joaquin     | 35,452  | 28,629  |
| San Luis Obispo | 16,637  | 16,072  |
| San Mateo       | 12,094  | 10,087  |
| Santa Barbara   | 18,934  | 15,754  |
| Santa Clara     | 60,216  | 48,005  |
| Santa Cruz      | 21,512  | 19,270  |
| Shasta          | 17,318  | 12,133  |
| Sierra          | 4,017   | 5,051   |
| Siskiyou        | 16,962  | 12,163  |
| Solano          | 24,143  | 20,946  |
| Sonoma          | 38,480  | 32,721  |
| Stanislaus      | 9,550   | 10,040  |
| Sutter          | 5,886   | 5,469   |
| Tehama          | 10,996  | 9,916   |
| Trinity         | 4,483   | 4,719   |
| Tulare          | 18,355  | 24,574  |
| Tuolumne        | 11,166  | 6,082   |
| Ventura         | 14,367  | 10,071  |
| Yolo            | 13,618  | 12,684  |
| Yuba            | 8,620   | 9,636   |

Of the fifty-seven counties in the State, all but eleven have increased in population during the decade, the counties showing more than 50% of increase being Tuolumne 83.5%, Kern 68%, and Los Angeles 67.8%. Los Angeles county shows the largest numerical increase (68,844), but more than three-fourths of this increase is due to the increase in the population of the city of Los Angeles.

The eleven counties showing a decrease in population are Alpine, Butte, Colusa, Del Norte, El Dorado, Lake, Plumas, Sierra, Stanislaus, Tulare and Yuba.

There are 116 incorporated towns and cities in California, for which the population in 1900 is separately returned. Of these, forty-six have a population in 1900 of more than 2000, and of these nineteen have a population of over 5000, ten over 10,000, and four over 25,000, namely: San Francisco, with 342,742; Los Angeles, with 102,479; Oakland, with 66,960, and Sacramento, with 29,282 inhabitants. The incorporated cities and towns whose population is over 2000 are as follows:

|                       | 1900.   | 1890.   |
|-----------------------|---------|---------|
| Alameda, city         | 16,464  | 11,165  |
| Auburn, city          | 2,050   | 1,195   |
| Bakersfield, city     | 4,836   | 2,626   |
| Benicia, city         | 2,751   | 2,561   |
| Berkeley, town        | 13,214  | 5,101   |
| Chico, city           | 2,640   | 2,894   |
| Eureka, city          | 7,327   | 4,858   |
| Fresno, city          | 12,470  | 10,818  |
| Grass Valley, city    | 4,719   |         |
| Hanford, city         | 2,929   | 942     |
| Long Beach, city      | 2,252   | 564     |
| Los Angeles, city     | 102,479 | 50,395  |
| Marysville, city      | 3,397   | 3,991   |
| Modesto, city         | 2,024   | 2,402   |
| Napa, city            | 4,036   | 4,935   |
| Nevada City, town     | 3,250   | 2,524   |
| Oakland, city         | 66,960  | 48,682  |
| Pasadena, city        | 9,117   | 4,882   |
| Petaluma, city        | 3,871   | 3,692   |
| Pomona, city          | 5,526   | 3,634   |
| Red Bluff, city       | 2,750   | 2,608   |
| Redding, city         | 2,940   | 1,821   |
| Redlands, city        | 4,797   | 1,904   |
| Riverside, city       | 7,973   | 4,683   |
| Sacramento, city      | 29,282  | 26,386  |
| Salinas, city         | 3,304   | 2,339   |
| San Bernardino, city  | 6,150   | 4,012   |
| San Diego, city       | 17,700  | 16,159  |
| San Francisco, city   | 342,742 | 298,997 |
| San Jose, city        | 21,500  | 10,000  |
| San Leandro, town     | 2,253   |         |
| San Luis Obispo, city | 3,021   | 2,995   |
| San Rafael, city      | 3,879   | 3,290   |
| Santa Ana, city       | 4,933   | 3,628   |
| Santa Barbara, city   | 6,587   | 5,864   |
| Santa Clara, town     | 3,650   | 2,851   |
| Santa Cruz, city      | 5,659   | 5,596   |
| Santa Monica, city    | 3,057   | 1,580   |
| Santa Rosa, city      | 6,673   | 5,220   |
| Stockton, city        | 17,506  | 14,424  |
| Tulare, city          | 2,216   | 2,697   |
| Vallejo, city         | 7,965   | 6,343   |
| Ventura, city         | 2,470   | 3,869   |
| Visalia, city         | 3,085   | 2,885   |
| Watsonville, city     | 3,528   | 2,149   |
| Woodland, city        | 2,886   | 3,069   |

The population of San Francisco, beginning with 56,802 in 1860, increased to 149,473 in 1870, or 163.1%. For the three succeeding decades there has been a normal increase, and the present population is 342,742, or more than six times what it was in 1860.

The population of Sacramento has increased from 6820 in 1850 to 13,785 in 1860, or 102.1%, and at present is over four times as great as it was in 1850.

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## FARMERS' CLUBS.

### Courtland Farmers' Club.

TO THE EDITOR:—Inclosed find report of Courtland Farmers' Club. Please publish same in your paper. This Farmers' Club is the outcome of the last Farmers' Institute held by Profs. Fowler and Cook at Courtland.—E. A. GAMMON, Courtland.

The first annual meeting and dinner of the Farmers' Club of Courtland, held on Wednesday, October 17th, at the residence of T. J. Stephenson, will long be remembered as one of the pleasantest social gatherings ever held in the neighborhood.

Mr. and Mrs. Stephenson are indeed almost ideal entertainers, their beautiful home making their task easier than would otherwise be the case, it being one of those massive mansions built on the old colonial style, with broad verandas which add so much to the appearance. One of them is enclosed, and, when desired, as on this occasion, makes a large dining-room capable of seating forty.

At the business meeting of the Club the names of ten applicants were received, and they were elected to membership in the Club. Officers were elected for the next year as follows: President, E. A. Gammon; Vice-president, Geo. B. Greene; Secretary, Mrs. T. J. Stephenson; Treasurer, T. J. Stephenson; Executive Committee—Miss Delma Green, Mrs. A. Runyon, Robt. Shields.

At 12:30 o'clock the President declared a recess, and a bountiful dinner provided by the ladies of the Club was served and greatly enjoyed by all. And such a dinner! Viands of nearly every variety and shape, the only drawback being the small eating capacity of the guests! Had this been increased fourfold, there would have been plenty. Only those present could appreciate this dinner.

At the close of the dinner President Barnes, acting as master of ceremonies, called upon several of the guests and members for speeches. T. J. Stephenson, in a few well-chosen words, extended a welcome to "Our Guests," E. A. Gammon responded to "Our Club," giving a short account of its formation six months ago and its growth since; ex-Senator Wm. Johnston, in his usual happy style, responded to "The Ladies," followed by a witty response from Mrs. S. McKeehan to "The Gentlemen." J. M. Stephenson spoke words of commendation and encouragement to the Club; Mrs. Wm. Johnston and others expressed their pleasure in the occasion. Each guest at table received a dainty souvenir card, containing an apt quotation, the reading aloud of which afforded both pleasure and amusement. After the dinner festivities were concluded, the Club was again called to order by President Barnes, in order to finish its business. President-elect E. A. Gammon was requested to take the chair, and presided during the remainder of the meeting, during which a vote of thanks was tendered the outgoing President for the able and impartial manner in which he had presided during his term of office. The subject chosen for discussion at the next regular meeting was "The Best Methods of Pruning and Spraying." The place of meeting, by invitation, was to be the residence of Mr. and Mrs. S. McKeehan. The Club then adjourned to meet Wednesday afternoon, November 21st, and the rest of the afternoon was spent in social enjoyment.

The Club members and guests present were: Ex-Senator and Mrs. Wm. Johnston, Mr. and Mrs. Dwight Hollister, Mr. and Mrs. C. E. Mack, Mr. and Mrs. Fred Gage, Mr. and Mrs. Geo. B. Greene, Mr. and Mrs. Albert Greene, Mr. and Mrs. M. P. Barnes,

Miss Jean Barnes, Mr. and Mrs. E. A. Gammon, Mr. and Mrs. A. Runyon, Mr. and Mrs. A. R. Nichols, Mr. and Mrs. T. J. Stephenson, J. M. Stephenson, Miss Blanche Hollister, Mr. Harper, Mrs. P. B. Green, Boyd Green, Mrs. S. E. Houston, Dr. J. H. Morton, Mrs. S. McKeehan, Mrs. W. A. Johnston, Dwight Johnston, Rev. C. F. Withrow, Robt. Shields, J. M. Buckley.

### Dustless Roads.

The California Dustless Roads Co. of Los Angeles, has just completed its contract with the board of supervisors to sprinkle with oil and keep in repair certain roads of the county. E. S. Mosher, the company's representative, states that he had oiled 22 miles of roads belonging to the county and 10 miles of roads belonging to the Kern County Land Co. Under the contract the valley roads leading to Bakersfield were to be oiled, put in good condition and kept so; the cost per mile being \$250. This would make a total cost to the county of \$5500 for the 22 miles. President Wm. H. Tevis of the Land Co. speaks highly of the oiled roads, but claims that more than one application of the oil is necessary to make them thoroughly hard and elastic. Experts state that there is about 50% of asphaltum in the oil, so that the effect on the roads is similar to that when paved with asphalt. The roads become smooth and resist easily very heavy travel.—Bakersfield California.

### Walnuts From Sewer Farm.

Superintendent Reynolds of the city sewer farm says that the crop of walnuts on the city property will amount to about three carloads; and that there will be not more than seven or eight sacks of "seconds" in all three. This is by far the largest crop the farm has ever produced and it also leads for quality. Mr. Reynolds sorted over 115 trays of the nuts and only found a tray and a half of second quality in the whole lot. The nuts have been sold to the Ontario Packing Co. for 8½ cents a pound for first; 6½ cents for seconds.—Pasadena Star.

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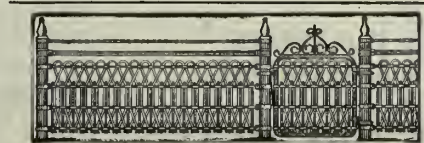
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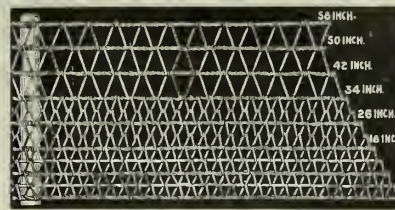
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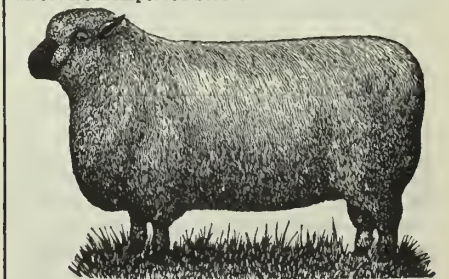
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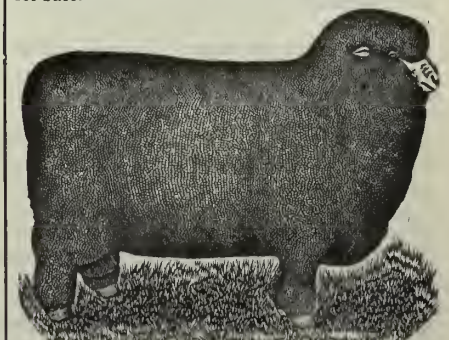
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## Patrons of Husbandry.

### Tulare Grange.

TO THE EDITOR:—Tulare Grange met in its hall on Saturday, the 20th inst.

Bro. E. C. Shoemaker made an interesting report of the proceedings of the State Grange lately held in Los Gatos. The meeting was well attended and was very harmonious in all its proceedings. The secretary reported a very material increase in Grange membership and State Grange funds.

Tulare Grange was given more than a fair representation on State Grange committees, Bro. Thos. Jacob being put on the Committee on Co-operation and Bro. Tuohy on the Committee on Judiciary. The report of Worthy Master Worthen should be carefully read by every farmer in the State.

The special subject for the day's consideration being "The Formation of Character the Highest Object of the Grange," was discussed by every member present. All reasoned that the lessons and work of the Order modify, educate and build up character, broaden the minds of the members, giving them higher and better views of their lives, of their duties to themselves and to society, thereby making of them better men and better women. This report but very poorly states the many nice expressions of the members as to the effect the Grange has in building up character.

**BOGUS BUTTER.**—The National Grange has approved House Bill No. 3717, "A bill to make oleomargarine and other imitation dairy products subject to the laws of the State or Territory into which they are transported and to change the tax on oleomargarine." The aim of the bill is best stated in Sec. 1: "That all articles known as oleomargarine, butterine, imitation butter, or imitation cheese, or any substance in the semblance of butter or cheese not the usual product of the dairy and not made exclusively of pure and unadulterated milk or cream, transported into any State or Territory, and remaining therein for use, consumption, sale, or storage therein, shall, upon the arrival within the limits of such State or Territory, be subject to the operation and effect of the laws of such State or Territory enacted into the exercise of its police powers to the same extent and in the same manner as though such articles or substances had been produced in such State or Territory, and shall not be exempt therefrom by reason of being introduced therein in original packages or otherwise; provided, that nothing in this Act shall be construed to permit any State to forbid the manufacture or sale of oleomargarine in a separate and distinct form and in such manner as will advise the consumer of its real character, free from coloration or ingredient that causes it to look like butter."

The bill is known as the "Grout Bill," has been favorably reported on by the committee of the House of Representatives to which it was referred, and will be brought up for action in December.

**DISCUSSION.**—In the consideration of the bill by Tulare Grange, the merits or demerits of oleomargarine or butterine as articles of nutrition or diet were not considered, but it was conceded and agreed every State and Territory should have the same police powers, at least, over articles manufactured within its own borders. It was further conceded and agreed that every manufacturer has a right to put his products in the most marketable form and color, but has not the legal or inherent right to give to his articles the form and color of some other article of well established reputation; the giving of his product such form and color is manifestly for imposing it on the unwary and is an intentional fraud on the non-observing consumer. It was agreed the bill has inherent merits and our representatives in Congress are earnestly requested to support it.

At the next meeting of Tulare Grange, Nov. 3d, the merits and demerits of the proposed constitutional amendments to be voted on at the election on the following Tuesday will be

considered. It is hoped every other subordinate Grange in the State will, at its meeting previous to the election, consider the proposed amendments.

Sister Weaver read a paper on "Character Building," and Sister Bertha I. Morris read one on the "Planting and Protection of Avenue Trees and Care of Highways."

The question for November consideration is, "What is the Duty of the Grange in the Support of Public Schools in the Formation of Character?" J. T.

Tulare, Oct. 22, 1900.

### Standing Committees of the State Grange.

TO THE EDITOR:—At the last meeting of the State Grange of California the following committees were appointed by Worthy Master Worthen to serve during the year and make report at the next meeting of the State Grange, which will be held in Petaluma:

**Education**—Mrs. C. F. Emery, Mrs. M. J. Worthen, Mrs. Rhoda Lambert, C. W. Childs, Elmer Chase.

**Woman's Work**—Mrs. S. P. Sanders, Mrs. S. J. Cross, Mrs. D. T. Fowler, Mrs. C. F. Emery, S. P. Sanders.

**Legislation**—J. D. Huffman, J. D. Cornell, W. W. Greer, Mrs. Frankie Greer, Mr. Brooke.

**Co-operation**—S. P. Sanders, A. P. Martin, Thos. Jacob, D. T. Fowler, Mrs. O. E. Borrette.

**Judiciary**—S. T. Coulter, J. Tuohy, D. M. Winans, Mrs. Mira Reese, C. J. Berry.

**Good of the Order**—H. C. Raap, Mrs. R. S. Twitchell, Mrs. Libbie Wood, Mrs. Jennie Gould, Nathan H. Root.

**Order of Business**—Wm. Johnston, H. F. Blohm, W. D. Houx, D. Flint, Mrs. C. S. Hayward.

During the last year the standing committees did some good work, and it is hoped that these new committees will do even better work than that done by their predecessors.

LAUROLA S. WOODHAMS,  
Sec. California State Grange.  
Santa Clara.

### Horticulturists and Vineyardists.

A man with the best of references, with thorough practical knowledge in orchards and raisin vineyards, with ten years of California experience and graduate of French Agricultural University, will take charge of a large orchard or vineyard at \$100 per month.

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Every horticulturist should have my 28-page illustrated catalogue which tells all about

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R. M. THAUQUE (established 1890), San Dimas, (Los Angeles Co.) Cal.

75,000 budded trees now ready for this season's trade.

## LOGANBERRIES!

I offer a fine stock of Loganberries: one-year-old transplanted vines and rooted tips. Orders from the trade solicited. Write for prices.

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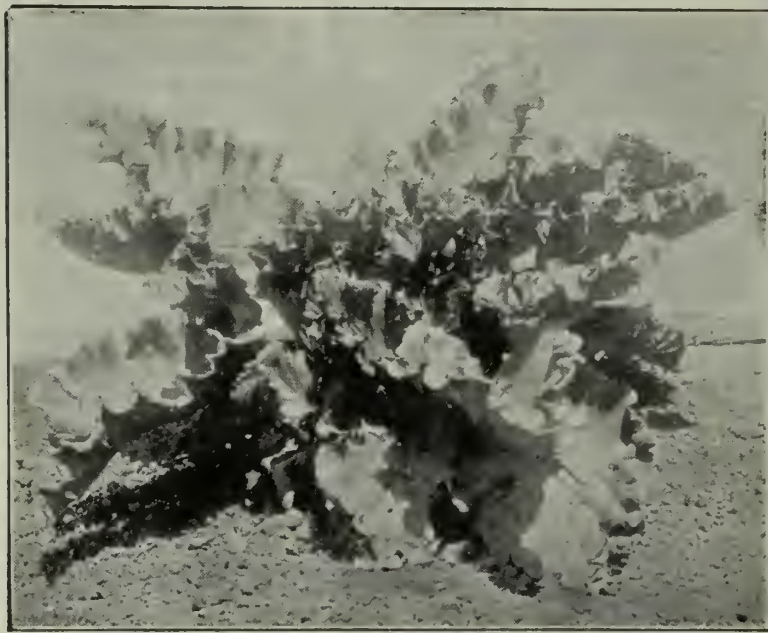
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Address GEO. C. ROEDING, Prop. Fancher Creek Nurseries, FRESNO, CALIFORNIA.

## A NEW VEGETABLE.



## Australian "Crimson Winter" Rhubarb.

The great value of RHUBARB as a vegetable has always been its earliness.

### AUSTRALIAN CRIMSON WINTER

is fully SIX MONTHS EARLIER THAN ANY OTHER RHUBARB.

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THE FERTILIZER OF THE AGE.

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## \$50.00 RANGE FOR \$25.00

TO INTRODUCE OUR

**TRIUMPH STEEL RANGE** into every section of the United States, we will for a short time deliver at your depot free of charge our highest grade Steel range for \$25.00. The regular retail price is \$50.00. It has six 8-inch lids. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21 1/2 inches deep, and 15-gallon reservoir. Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet. Best Range made. WM. G. WILLARD, Manufacturer, 619 N. Fourth St., St. Louis, Mo. Will ship C. O. D. with privilege of examination.





### List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
PIONEER PATENT SOLICITORS  
FOR PACIFIC COAST.

FOR THE WEEK ENDING OCT. 16, 1900.

- 659,949.—PACKING FRUIT—C. W. Arrasmith, Courtland, Cal.  
659,804.—CAN HEADING MACHINE—E. C. Atwood, S. F.  
659,645.—PIPE BOILER—C. D. Casad, Seattle, Wash.  
659,810.—MECHANICAL MOVEMENT—E. Cherry, Santa Rosa, Cal.  
660,049.—SUPPORT—C. E. Cook, Whittier, Cal.  
659,794.—HYDRAULIC NOZZLE—W. A. Doble, S. F.  
659,795.—GAS APPARATUS—McD. Elliott, Santa Rosa, Cal.  
659,918.—MOP HEAD—J. R. Froberg, Grass Valley, Cal.  
659,796.—MAIL POUCH—Gavin & Griffin, Eureka, Nev.  
659,745.—CONVEYOR FOR ROPEWAYS—A. S. Hallidie, S. F.  
659,748.—CULTIVATOR—R. L. Hill, Saticoy, Cal.  
659,923.—WEIGHING MACHINE—G. Hoepner, S. F.  
660,015.—SAWBUCK—T. J. Johnson, Harrington, Wash.  
659,798.—SPRING CONNECTION FOR VEHICLES—P. L. Jones, S. F.  
659,977.—OIL CAN—A. Kitterman, Portland, Or.  
660,017.—ROTARY ENGINE—W. Lambert, Los Angeles, Cal.  
659,684.—RUBBER DAM HOLDER—J. A. W. Lundborg, S. F.  
659,932.—GOPHER TRAP—Z. A. Macabee, Los Gatos, Cal.  
660,061.—LATCH AND LOCK—J. B. E. Macnamara, S. F.  
660,062.—HAT—T. L. Mahoney, S. F.  
660,077.—WEIGHING MACHINE—J. Manes, S. F.  
659,934.—STAMP BATTERY MORTAR—W. A. Merralls, S. F.  
659,753.—DRAG SAW—W. A. Miller, Wapinitia, Or.  
659,987.—CARBURETOR—H. C. Ray, Visalia, Cal.  
659,801.—ALMOND HULLER—W. G. Read, Colusa, Cal.  
659,901.—WATER MOTOR—J. Sands, Seattle, Wash.  
659,708.—PLANER—G. W. Stetson, Seattle, Wash.  
660,035.—WAVE MOTOR—G. N. Todd, Los Angeles, Cal.  
660,036.—WAVE MOTOR—G. N. Todd, Los Angeles, Cal.  
33,400.—DESIGN—Rova E. Alexander, Garfield, Wash.  
33,391.—DESIGN—C. H. De Voll, Seattle, Wash.

### To Remove Alkali.

What may point a way to the removal of the alkali from irrigated lands in the West, brought there by the impregnated water from artesian wells, is a method devised by R. P. Tjossem, a farmer in the State of Washington, to reclaim some alkali land. His method is a system of subdrainage, for the speedy and economic introduction of which he has invented a machine. What his system will do is shown in a beautiful field of clover and alfalfa, now growing on land that two years ago was a bed of alkali upon which salt grass would scarcely grow. About fifty acres have been treated by him and fifteen acres have been seeded. This year six large hay stacks adorn the tract. The crop is clover and alfalfa mixed, and the first cutting yielded three tons to the acre; the second, now being cut, is yielding two tons, while it is said a finer quality of hay is not to be found in the State. The tiles are laid 4 feet below the surface by an implement resembling a great plow, which is dragged by a wire cable working around a winch, operated by two horses.—Holister Bee.

### Catarrh Cannot be Cured

With LOCAL APPLICATIONS, as they cannot reach the seat of the disease. Catarrh is a blood or constitutional disease, and in order to cure it you must take internal remedies. Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces. Hall's Catarrh Cure is not a quack medicine. It was prescribed by one of the best physicians in this country for years, and is a regular prescription. It is composed of the best tonics known, combined with the best blood purifiers, acting directly on the mucous surfaces. The perfect combination of the two ingredients is what produces such wonderful results in curing Catarrh. Send for testimonials, free.  
F. J. CHENEY & CO., Props., Toledo, O.  
Sold by druggists, price 75c.  
Hall's Family Pills are the best.

## THE VETERINARIAN.

Answers by Dr. Creely.

### PROFESSIONAL ADVICE REQUIRED.

TO THE EDITOR:—I have a cow that has an affection of one of the eyes. The eye washers seem to be growing and hardening. The lids are also swelled and there is a watery discharge. Has been so for several months and gradually getting worse. The eye is now swelled so as to be closed almost entirely. Can you give any remedy for same?—SUBSCRIBER, El Casco, Riverside Co.

There is some growth posterior to the eye. Consult the nearest qualified veterinarian at once. E. J. CREELY.  
510 Golden Gate Ave., S. F.

### HYDRATE OF CHLORAL FOR MILK FEVER.

TO THE EDITOR:—In reading over the piece in the PACIFIC RURAL PRESS of some time ago, in the receipt for the iodide treatment for milk fever, it speaks of the chloral hydrate treatment for milk fever also, but does not state what it is. Would you kindly give me the recipe for the chloral hydrate treatment for milk fever?—T. A. VARIAN, Ferndale.

The iodide treatment in milk fever is not used with as much success as was first reported, on account of it causing a caked bag as an after effect. I have used it, but not with much success. I prefer the chloral hydrate treatment, because after effects are not so bad.

Take 2 drachms of chloral in 3 pints of water and inject in four teats. Decrease the dose one-fourth each day.

In the 52 issues of the year "The Youth's Companion," Boston, Mass., published more than 200 stories, yet so carefully are they selected that they prove inexhaustible in variety; unending in the power to delight. The stories already in hand for "The Companion's" 1901 volume show that this feature of the paper will be as strong as ever.

## GLENN RANCH,

Glenn County, :::: California,  
**FOR SALE**  
In Subdivisions.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for county and State taxation purposes.

This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

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## PRODUCTIVE FARM LAND.

For Sale in Tracts to Suit.

Come and see the crops growing on the Rancho Santa Clara del Norte. Now is the time. A large ditch runs through the property, guaranteeing ample water rights to irrigate every acre of land.

Farmers and orchardists seeking good productive land for all kinds of crops—Beans, Beets, Alfalfa, Corn, Barley, Walnuts, Apricots and Lemons—will do well to look into this proposition before investing elsewhere.

The climatic conditions are as near perfect as possible.

For full information, apply to GEO. C. POWER, Agent. Office—Palace Building, 152 Main St., Ventura, California.



We are the largest manufacturers of Steel Wheels and Truck Wagons in the World. Write for Catalogue. Havana (Ill.) Metal Wheel Co.

### Poultry Show at San Jose.

The coming show of the Santa Clara Clara Valley Poultry and Belgian Hare Club in San Jose, November 14th to 17th, promises to be one of the finest exhibits of poultry and Belgian hare ever held on the Pacific coast. All fanciers and breeders of poultry and Belgian hare, wherever located, are invited to join in friendly competition in the show room, where all will receive courteous consideration. The society has secured the services of Henry Berar, judge of poultry, and Chas. R. Harker, judge of Belgian hare, to place the many awards which are offered. Full information can be had by addressing E. Van Every, Eden Vale, Santa Clara county.

### BRANNT'S PRACTICAL TREATISE ON THE MANUFACTURE OF VINEGAR, ETC.

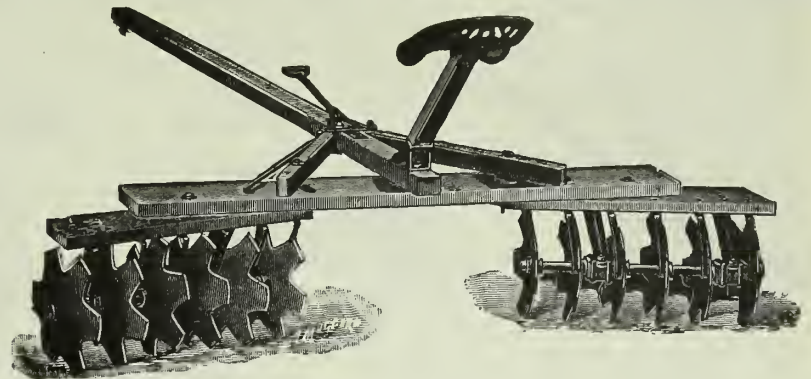
JUST READY.

A Practical Treatise on the Manufacture of Vinegar. With special Consideration of Wood Vinegar and other By-Products Obtained in the Destructive Distillation of Wood; Fabrication of Acetates; Cider and Fruit Wines; Canning and Evaporating of Fruit; Manufacture of Catsup, Fruit Butters, Marmalades, Jellies, Pickles and Mustards; Preservation of Meat, Fish and Eggs. By WILLIAM T. BRANNT. Illustrated by 104 Engravings. 8vo., 590 pages. Price \$5.00.

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Are now offered for sale in lots of from 5 TO 40 ACRES. This is the most fertile body of land ever placed on the market, and is located in the FINEST FRUIT SECTION IN THE STATE. It is a living testimonial of the varied fruit and cereal productions that can be grown in the State.

Read What Can Be Grown on This Land

:::: WITHOUT IRRIGATION. ::::

FOR DESCRIPTIVE TREATISE, TERMS, ETC.,

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NITRATE IS OF PRIME VALUE IN THE GROWTH OF

## NITRATE OF SODA AS A FERTILIZER.

Citrus Fruits,  
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EXPERT OPINION—Dr. Bernard Dyer (Consulting Chemist of Various British Agricultural Societies), writes:

"Nitrate of Soda is not a mere stimulant, as was erroneously supposed in earlier days. It is a true and very profitable plant food, and when it is properly used it neither exhausts nor injures the soil, but improves both its condition and its fertility."

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Write to them for pamphlets on Nitrate of Soda as a Fertilizer.



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Could Not Do Without It.  
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We bought a No. 5 U. S. Separator over 2 years ago, and we could not do without it. It has paid us more than 5 times the original cost. The repairs have been very little, only rubbers. Think it the best machine a farmer can have on a farm.  
JOHN GIBBLE.  
Write for catalogues containing many more similar to the above telling of the many advantages of having a U. S. Separator.  
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## 60 Days' FREE Trial.

Prosperity renewed, I renew the "New Becker" Washing Machine Factory (which I discontinued in '96). I will ship, in localities where, as yet, I have no Agents, 1 sample No. 2 "New Becker" (Pat. Improved) and "Empire" wringer, for trial, the party to pay for them at wholesale prices and act as Agent, if found satisfactory, if not return them, your money refunded. The "New Becker" has a reputation. Why? Because old customers are buying new machines after 10 years' use. It is the only perfect washer ever invented. Why? Imitation of hand-rubbing, the principle. It only needs to be seen to be appreciated. See your neighbor's. TRY IT before buying another.  
E. W. MELVIN, Prop. and Manfr., SAN JOSE, CAL.

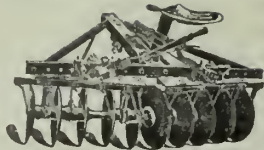




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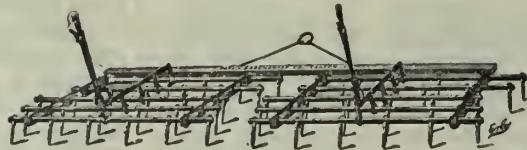


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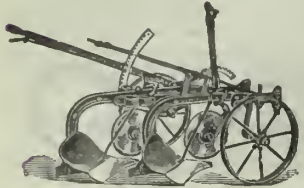
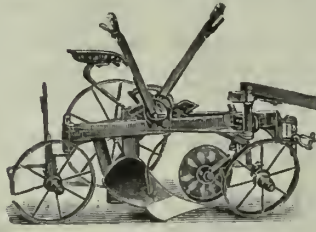
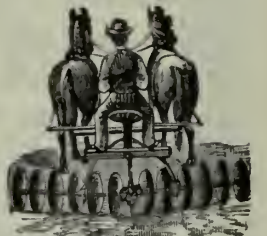


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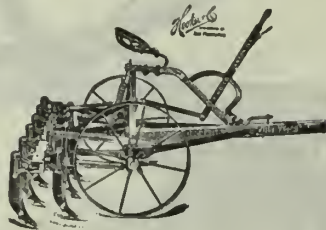
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10, 12 OR 14 INCH BOTTOMSCANTON THREE FURROW GANG  
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14 OR 16 INCH

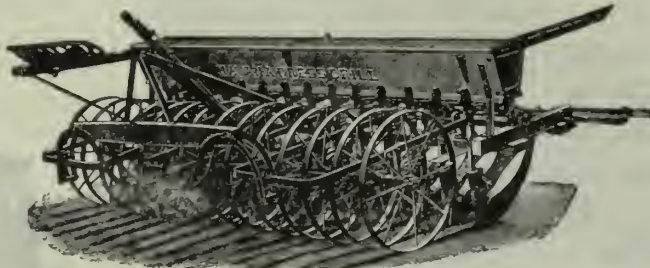
CANTON DISC HARROW



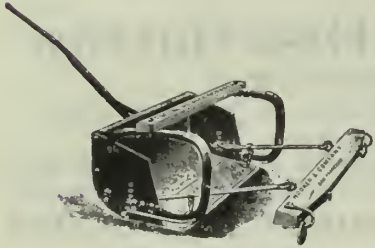
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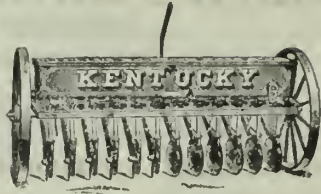
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HAVANA PRESS DRILL



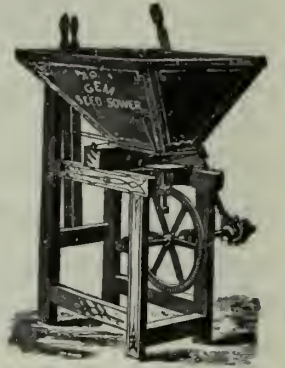
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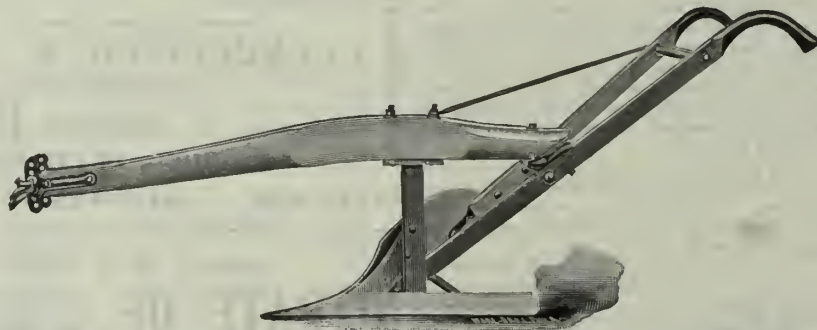
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**PLOWS!**

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**PLOWS!**

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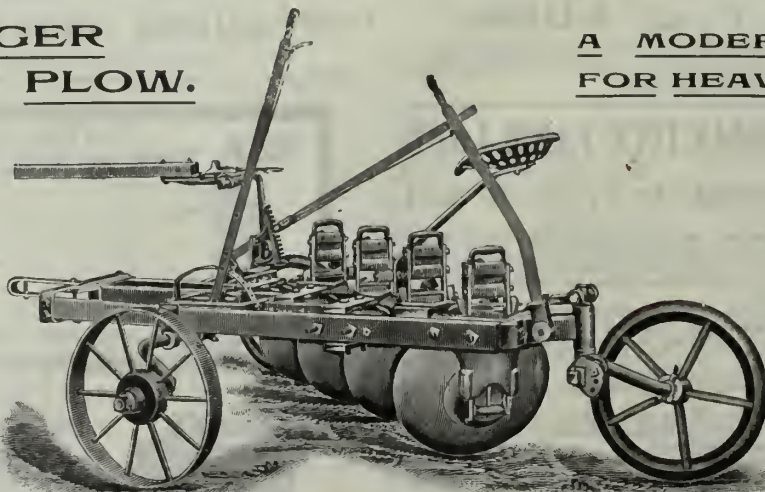
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TIGER PLOWS ALWAYS SCOUR.

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CUTS, PULVERIZES AND  
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BEAUTIFUL SEED BED.

SAVES ONE HARROWING.

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SACRAMENTO.

LOS ANGELES.

PORTLAND.



# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 19.

SAN FRANCISCO, SATURDAY, NOVEMBER 10, 1900.

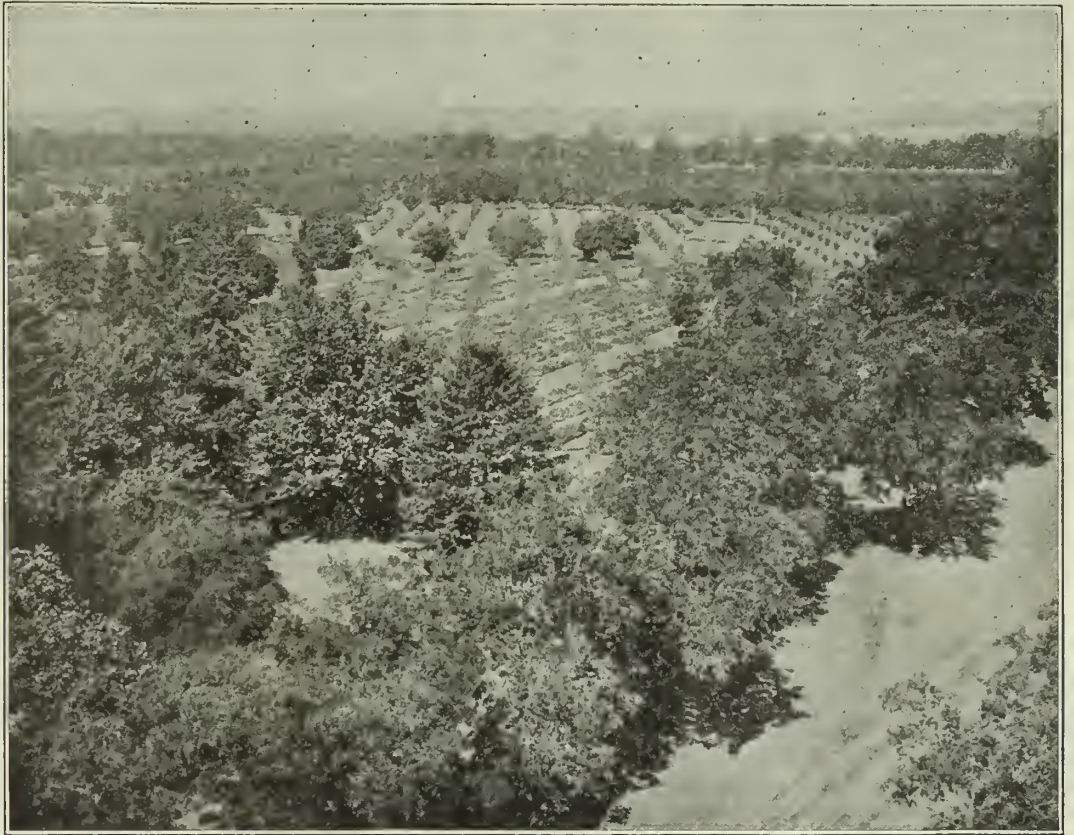
THIRTIETH YEAR.  
Office, 330 Market St.

### In the Sacramento Valley.

It is timely to allude to the great Sacramento valley, one of the main subdivisions of the State of California—a region of unexcelled richness and variety of resources and adaptabilities, which seem to be now on the eve of wider popular recognition and appreciation than has hitherto been accorded. The early history of the Sacramento and its encompassing foothills is really the history of California, for the stirring deeds of pioneers during the first decade following the gold discovery were either achieved in this region or on the way toward it. Early agriculture and horticulture, as well as early mining, won their striking successes in this valley. With such a rapid youth the region seemed to grow prematurely old and to largely cease its activity and development, while other parts of the State were winning such novel triumphs in such new ways. More recently, however, the Sacramento valley is awakening and putting on new strength, and during the last two or three years has done more in settlement and colonization than any other portion of the State. Its present prominence is its rightful position in the public eye. No part of the State deserves better of fortune than that in which the foundations of our prosperity were laid by the pioneers of the earliest days.

And in the earliest days we mean those preceding the gold discovery. It was here that Sutter established himself and Bidwell began his career which has just closed so full of honor to himself and to the State of his choice. The pictures on this page are illustrative of Rancho Chico, the estate of General Bidwell, and they are also widely characteristic of the best lands of the great valley in which the scenes are laid. Rich soils, abundant waters, a region of ample rainfall and with temperatures befitting the grandest semi-tropical fruits in some regions and in others bringing the richest winter growth of grain and pasturage—all these are found in the capital valley.

It is interesting to note that agencies for development are at present more active in the Sacramento than elsewhere. The Maywood enterprise which has



Orchard Views on Rancho Chico, Sacramento Valley.

quickly called into existence Corning and an environment of fruit farms where only open grain fields were seen before is one of the most notable of recent enterprises. The subdivision of the Bidwell property bids fair to bring new life and largeness to Chico, and no doubt there will be many other undertakings invited by the success of these. There is now an active association at work whose aim is embodied in its name, the Sacramento Valley Development Association. It seems to have a considerable membership and to be generally upheld throughout the several counties of the valley. The officers of the Association are: W. S. Green, president, Colusa; F. E. Wright, secretary, Colusa; F. Miller, treasurer, Sacramento; and the executive committee: J. D. Coleman, Sacramento; W. A. Beard, Oroville; H. P. Stabler, Yuba City; E. A. Forbes, Marysville; F. S. Berger, Willows; C. F. Foster, Corning; J. W. Kearth, Colusa, and Ralph Parcar, Vacaville.

It is intended to undertake quite an active campaign in making the resources of the valley known. The nine counties composing the Association are to be asked each to contribute \$150 to pay the expenses of printing 20,000 pamphlets for distribution throughout the valley and in the East, the matter to be prepared by Gen. N. P. Chipman, who had signified his willingness to undertake the work, and for which he is peculiarly qualified by his wide knowledge and by his long residence in the valley. We expect it will be a model pamphlet in truth telling as well as in style and pertinence.

We have chosen to allude thus prominently to the awakening of the Sacramento valley people because we believe it should be merely the first sign of a general awakening throughout the State. The conditions in other parts of the world are better for selling out and removal than they have been for a number of years. The disposition of those who are prompted to seek a genial clime is strongly favorable to California. Our people should do their parts by making known the truth about the State and in pointing out the opportunities which it offers to those who buy wisely and desire to work well for success.

DURING the fiscal year ending October 31st, 17,829 cars of citrus fruits were shipped from southern California, of which about 2000 cars were lemons. By November 5th the movement of the new crop will have fairly begun, and probably 3000 cars will be shipped East for the holiday trade. The estimates for the coming season vary between 20,000 and 30,000 cars. Eight hundred and fifty to eleven hundred cars of celery will be shipped this season, as against seven hundred and fifty last season.

It is reported from San Jose that some Sugar prunes which have been placed on exhibition by Morgan Niles will average from twenty to thirty. They ripen in July and are off the drying ground by September 15th, thus being cured in the very best drying season of the year, when there is no danger of fogs or rain. Three of the Sugar prunes picked from a yearling graft in the orchard of W. M. Scott, weighed 7½ ounces green and 2½ ounces dried.



Chico Creek Near the Bidwell Residence



# PACIFIC RURAL PRESS.

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E. J. WICKSON, Horticultural Editor.

San Francisco, November 10, 1900.

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## The Week.

The great event has passed; the country survives; the majority on the side of the preservation of the present course of things is so large that objection seems hardly worth making and in a few days one will have to consult an almanac to be convinced that an election has gone by. We do not think it would be desirable to have many such slumps as this year's campaign. It is better to have greater interest and more evenly divided results, but we shall have to take it as it comes this time and trust to a sharper issue next time. For the immediate future it seems reasonable to expect a continuation of the confidence and activity which has prevailed of late, and the lesson will be to strive for full amounts of good products expecting that the world will have need of them. With a good season weather-wise, California ought to reach this year maximum figures in all lines.

Wheat is again above the dollar mark and, though droopy, is better than one week ago. The Argentine shortage is helping and foreign markets are also in better shape. Over 11,000 tons in three large cargoes went to Europe this week. Heavy shipments of flour, over 40,000 barrels, went out to China and Japan. Barley is firmer and \$1 per ton higher for feed, but high-grade barley is not changed. Oats are steady at old figures and a fair movement taking place. Corn is unchanged. Hay is quiet but unchanged—receipts are growing a little. Bran is lower and other millstuffs declining. Beef, first quality, is higher, shortage of cattle being claimed in Nevada. Mutton is steady and hogs are going at full rates and supplies well taken care of. Butter is dropping owing to increased expectations of fresh product. Cheese unchanged and firm. Eggs are declining. There is little change in poultry, choice young stock doing well. Large Eastern hens are selling low. Dry beans are unsettled by reports of Eastern beans coming, but there is probably not much in it, though some may come. Eastern peas are being received. Potatoes are quiet and weak, except for very fancy. Onions are higher and firm. Grapes are high and few are offering. Apples and pears are about the same and too many poor ones here. Oranges are about the same and moving slowly. Lemons are in overstock of inferior fruit. There is nothing doing in dried fruit, owing to election listlessness. The last Australian steamer took about fifty tons of dried fruit, aside from 600 boxes of raisins and 8000 boxes of apples. Nuts are quiet, in sympathy with dried fruits; even almonds are now apparently hard to sell. The wool market is firmer

but holders are asking more money. Hops are steady and demand fair and offerings not large.

We wish the reporters for the daily newspapers would let Mr. McAdie alone. They are doing all they can to bring his work into disrepute by making him claim as discoveries things which are perfectly well known to fruit growers, and other things which fruit growers know are not true. Mr. McAdie is engaged in a careful examination of frost phenomena, and will ere long give us conclusions which will no doubt effectively arrange known facts and demonstrate new ones; but, unless he can shut off the reporters, he will stand in the eyes of the fruit growers as a roaster of chestnuts and a forger of fallacies. Not long ago the reporters put him in the position of claiming all the Riverside discoveries as the work of his Bureau, and the Riverside people naturally objected. Now we are having him making discoveries about the location of tender fruits which have been known for years to circumspect and well informed planters. Mr. McAdie is all right, but he ought to keep a few forked lightnings in the corner for the reporters.

The activity in vine planting which we spoke of recently is extending all through the State and reviving old centers of viticulture which have been for some time in a state of innocuous desuetude. This fact is seen in the reported doings at Cucamonga, the famous old wine center of early days in San Bernardino county. It is reported that the Cucamonga Fruit Land Company and the Cucamonga Land & Improvement Company convey to the Italian Vineyard Company 1235 acres of land, which includes the townsite of South Cucamonga and lands adjoining. The Italian Vineyard Company is said to be an organization with ample capital, and that a large part, if not all, of the newly acquired territory will be planted at once to wine grapes. The land purchased is all good, tillable land. A large part of it has never been improved. There is already a large number of vineyards near Cucamonga and the grape growing industry has recently proven very profitable for the growers. The consideration, as calculated by the internal revenue stamps, is \$27,500. Now we wait to hear of the revival of Anaheim and other famous old southern points.

Speaking of the Anaheim district, we remember that when we were at Fullerton recently we met Mr. Otto Des Granges, who reported a phenomenon which may be an augury if nothing more. He told us that old vine roots remaining from stumps cut out below the reach of the plow in 1886, because of the vine disease, were now sending up strong canes. He encountered them in considerable numbers this year when working the ground for other crops. He is sure that they have not appeared above the surface before since the time the old vines were dug out. This seems to be rather a hard thing to believe on the face of it—that there could be a case of suspended animation in a vine root for fourteen years, but such Mr. Des Granges holds to be a fact of his own observation. We are disposed to consider it a suggestion from below that the wine interest ought to be revived in that region, and no doubt many of our readers who believe that all suggestions about the wine interest come from below, will agree with us. But what can we do with Mr. Des Granges' observation? Does any reader know of any such resurrection of a vine?

Grape prices are charming. The highest figure we have heard of so far is \$26 per ton for choice claret varieties. This is coming close to twice the price Mr. Crocker offered two years ago and no wonder vine planting is becoming very popular. Shipping grapes are also striking high notes this year. The Lodi Sentinel tells of two cars sold in Chicago. One disposed of on October 26th, brought \$2347. The grapes averaged as follows: Tokays, \$1.79; Tokay clusters, \$2.85; Emperor, \$2.01; Emperor clusters, \$1.90; Red Emperor, \$1.80; Ferrera, \$1.65; Muscat, assorted, \$1.38. On October 31st, a car containing 1132 packages, considerably less than a full car, brought \$2199. This shows what late table grapes sometimes bring and the popular varieties for this trade.

An interesting fact comes out in connection with the butter scoring at the recent State Fair. A cream-

eryman in Humboldt county was somewhat in doubt whether the modern method of judging butter by points was a good way, and so he was wise in his generation and sent two entries of the same day's churning—one in the name of the creamery and the other in the name of one of the patrons. The butter was, of course, identical, and he would not have been surprised if one was given a prize and the other kicked out of the back door. He was surprised, however, to find that the two lots—the connection of which the judges of course knew nothing—scored within a fraction of a point of each other when the score cards of the three judges were combined. It was a victory for an up-to-date method and a demonstration of its trustworthiness. It was not a very bad speculation either, for, if we are not mistaken, he secured two prizes instead of one by making too entries. It sometimes pays to have doubts.

We have received from W. A. Taylor, acting Pomologist of the Department of Agriculture, full information concerning the award of prizes at the Paris Exposition at the competition of October 19th for apples, pears, plums and peaches of the crop of 1900. We notice that awards are secured by growers in several Eastern States and by the following growers in Idaho: C. S. Fosselman of Weiser, C. P. Hartley of Caldwell and I. P. Perrine of Blue Lakes. We delight in these triumphs of our Idaho neighbors as upholding the fact that the Pacific coast grows fruits, but where are the California fruits? We had a California commission with a liberal appropriation and reports are that they made a very creditable display of California in citrus fruits and dried fruits and other things, but how is it that they did not arrange to have California's fresh deciduous fruits represented in these competitions? We have had awards for citrus fruits and for collections of horticultural photographs in large number, but has there not been an unfortunate oversight in letting these fresh fruit competitions go by default? And it would have been so easy to have made the show. Mr. Taylor writes that the fruit left New York by steamer Wednesday, September 26th, via Southampton and Havre, and was delivered in Paris Friday, October 5th. The actual time from the wharf in New York to the Exposition building was 8 days 18 hours. The display is reported to have been the finest yet made in the American section, which continues to attract much attention. And still the uncomfortable reflection remains that California was not in it.

At the Good Roads Convention, of which an outline is given on another page of this issue, there were many resolutions adopted. They commended State highways at public expense and the continuance of the highway department of the State government, with not more than one commissioner, with such clerical and engineering help as may be necessary, the purpose of such department being for the collection of information regarding the different soils, road building materials and road problems in the various portions of the State and the distribution of such information without cost, and for superintendence of highways maintained and constructed by the State. This question of road laws and road building will come before the Legislature again this winter and those who have convictions should get them ready for the public eye.

The consumption of imported butter is increasing in Germany, having amounted to something like 10,000 tons during the first seven months of this year. Of the above amount, Holland, Austria-Hungary and Russia furnished three-quarters. Our butter is equal to the best produced, and Consul Hannauer sees no reason why the United States should not supply the German market with this commodity, as it does with lard, meat and grain.

Official returns show that the grain has been completely burned up by the drouth in portions of Siberia. The fields have not been harvested and are used for pasturage. The price of grain at Semipolatisak is over 1 rouble per pood.

There are 4110 known and cultivated varieties of flowers in Europe, only 400 of which have any odor, 50 of which may be classed as "disagreeable."

A syndicate has been formed at Ockensfurt, Bavaria, to apply electricity to agriculture.



## QUERIES AND REPLIES.

### Constancy of Thompson's Navel.

TO THE EDITOR:—What does agricultural science say as to the likelihood of lasting constitutional vigor in such an irregular product of manipulation as Thompson's improved oranges, made by combining two half buds of different varieties? It seems so violent an interference with the rights of varieties that I have some fears of instability of trees and fruit so produced, and I ask the question because I have thoughts of using some of the buds. If it is all right, various interesting experiments might be tried with citrus fruits, as, indeed, I believe Mr. Thompson is doing, as I see he advertises "Navelencia" buds, which are to produce a very late Navel.—ORANGE GROWER, Los Angeles.

Whether Mr. Thompson secured his Improved Navel by split buds and alternation of stocks, or whether he secured it in spite of this intricate process, does not particularly matter. The type is fixed or at least as well fixed as other constant varieties, and we should not hesitate a moment about budding it in with well-authenticated buds. We have known the variety for at least twelve years and have always found it recognizable and possessed of the same characters. This seems to us sufficient proof of constancy. Mr. Thompson's Navelencia may also prove to be constant and valuable. We prefer to judge Mr. Thompson by his deeds rather than by his theories. The deeds are good; the theories may or may not account for them.

### To Get Larger Trees.

TO THE EDITOR:—I have several prune trees (Robe de Sargent) that seem to be stunted or dwarfed, that is, while apparently healthy they have not made as good trees as others by the side of them, though according to size they bear rather heavier than the trees of larger growth. Can the cause be from a deficiency of root growth (all are on myrobolan root)? If such be the cause, would the trees likely be benefited by being cut back and grafted over? Any suggestions will be thankfully received.—T. P. S., Los Gatos.

The trees may be on a weaker root (for there is often considerable difference in strength in roots of the same kind), or they may be on places of shallower soil, or some other underground condition or adversary may have set them back. It is customary for such unfortunate trees to out-bear those which are growing more vigorously. Nothing would be gained by grafting except the cutting back which stimulates wood growth by giving the root the temporary advantage. The same result can be secured by winter pruning the trees without grafting over. Give them some manure this winter and perhaps some water next July and you will get a larger tree, unless there is something serious the matter with the root or the place where it is trying to grow.

### The Wretched Wormy Apples.

TO THE EDITOR:—I spent some time last week in loafing around the fruit commission houses in your city. I was chiefly struck with the way in which the growers still insist in killing their own market. Wormy apples—wormy apples—wormy apples—everywhere! Wormy apples at 15 cents a box and slow buyers at that! Boxes must cost 5 cents, cartage 2 cents, freight 5 cents, packing 3 cents, commission 1 cent at least, this makes 16 cents at very lowest. So growers ruin the price, not only of their neighbors, but also of their own good fruit for the privilege of paying a freight and lumber bill and disgusting the public with all fruit. I think we need the fool-killer around among fruit growers and shippers.—EDWARD BERWICK, Monterey.

This is not a question—there can be no question about it—but we print it in this place for the sake of prominence. How long people will ship such stuff to San Francisco we cannot be sure, for it seems unpracticable to condemn and destroy it. The shipments will probably continue as long as there is a cent in it, and the sooner there is a sure loss in it the better for the apple interest.

### Sugar Yam and Vegetable Varieties.

TO THE EDITOR:—Can you tell me where I can get the sugar yam; also where I can get a treatise on all kinds of vegetables, melons, etc., describing the different varieties of each?—D. A. SUGO, Rivera.

We do not know of any treatise which describes all varieties of vegetables. We find Robinson's "Vegetable Garden," published by John Murray of London, very useful as a source of information concerning varieties grown in Europe, but we are receiving

many things from Asia and other parts of the world which this work does not include. The catalogues of the leading seedsmen comprise the only literature generally available which keeps up with these new things. The sugar yam is one of the class of soft sugary sweet potatoes which are not usually esteemed in this State, where the preference is for the drier kinds. A collection of the sugar varieties was recently grown at the University Experiment Station at Pomona, and the foreman, Mr. J. W. Mills, can give information about them.

### Resurrecting Dried Fruit.

TO THE EDITOR:—Kindly give me some idea as to the care and methods of renovating and removing worms from such fruits as raisins, dates, figs and apricots.—C. N. HENSLEE, Vancouver, Wash.

We do not know much about this. We presume there is no royal road or process. The fruit can be picked over and in the case of large, dry pieces like figs and apricots the worms can be riddled out with a coarse sieve. Any survivors or eggs can be killed with a hot dip or a hot bake, or by a bath of carbon bisulphide vapor. But wormy fruit is seldom worth saving. It makes good pig feed. Keep the fruit tightly closed from the access of the moth and you will have no worms.

### Sugar Prune on Peach.

TO THE EDITOR:—Seeing several inquiries on this combination in the PACIFIC RURAL PRESS and having many similar ones myself, I would say that until I received these inquiries had supposed the union was good. I have Sugar prunes grafted and budded on peach, almond and plum; and on my own grounds all have made a perfect union. But as I use no peach for stock but the Wager-Muir family, on account of its unusual hardy roots, I have had no experience with other strains of peaches for stock, but I am told by nurserymen in this vicinity that the union in many cases is not good. A similar peculiarity appears with the French prune when grafted on the apricot (which is never advisable), but on Royal apricot seedlings it often makes a good union and a good tree, but not on the other apricots generally grown in California. The subject of the affinity of stocks is exceedingly complicated. Each individual seedling has its peculiar attractions and antipathies which can be discovered only by test. My own opinion is that in the future no plum or prune of the Domestica class will be planted on any root but its own. At Mr. Pepper's nursery in this county may be seen plum trees nearly fifty years old almost as large as a valley oak and in perfect vigor and productiveness. They stand on these roots while those grown on peach, myrobolan and other roots by their side are almost universally wrecks or have disappeared altogether. The Imperial gage, Pond's seedling and many others produce quite uniformly vigorous seedlings, which have proved to be the best stock known for the Domestica plums and prunes on many if not all soils. I hope to see them demanded exclusively by planters who are willing to pay 1 cent extra for a vigorous long lived tree. The almond is also a most excellent stock for a very few of the Domestica. Plums and prunes when grown on dry, porous soils, and for these few varieties—including the French prune—cannot well be improved upon. The selection of stocks is quite as important and almost as complicated as the selection of varieties; I have never observed that the different methods of budding or grafting had any permanent influence in the union of varieties—it is simply a matter of affinity.—LUTHER BURBANK, Santa Rosa.

TO THE EDITOR:—My experience with the Sugar prune is quite similar to Mr. Bogue's. I have several thousand trees in nursery, a large percentage of which are worthless. They unite well with Myrobolan. I have some grafts which have been growing two years on peach in orchard and seem firm, but a seam between the graft and stock shows that the union is not very good.—T. J. TRUE, Forestville.

The foregoing relates to the antipathy between the Sugar prune and peach stock which was mentioned in our last issue. The points made are of very wide interest.

### A Leaf Miner.

TO THE EDITOR:—I send two leaves; one is a morning glory and the larger one is the moon flower. What is the little insect on them, and is there a remedy? I have been bothered with it all summer on my vines.—MRS. J. W. GILLIAM, Madison.

The insect is a leaf miner—a small larva working between the two epidermises of the leaf. The parent is probably a small fly. As the worm is an inside feeder, the only way to reach it is when it takes its first bites. Paris green—one pound to 200 gallons of water—sprayed on just before you usually see the first sign of the insect's work, might catch him. Or

the fly might be discouraged by spraying with whale oil soap. It is a hard proposition at best, and if the pests are numerous enough to make the plant unsightly, we should choose some other vine not subject to such attacks.

### A Cental of Produce.

TO THE EDITOR:—Will you kindly inform me what weight there is in a "cental?" Grain, potatoes, etc., are sold here by the bushel.—L. J. PETERS, Athens, Ohio.

A cental is 100 pounds. Selling by weight is far better than by measure.

### Chester White Hogs.

TO THE EDITOR:—Can you refer me to some breeder of Chester White hogs in California?—H. R. RICKFORD, Monterey.

We know of none at present. White hogs are open to objections in this State, though some are kept.

## WEATHER AND CROPS.

### Report of the U. S. Weather Service for Week Ending November 5, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

#### COAST AND BAY SECTIONS.

Warm weather has prevailed during the week, but with cool nights and heavy frosts in some places. Rain has fallen in portions of the central and northern counties, and has greatly benefited early sown grain and pasturage. In parts of the northern section the frequent showers have retarded grain planting, while in some of the southern counties the soil is still too dry for plowing and seeding. Early sown grain is doing well, but would be benefited by heavy rain. Prospects are good for a large acreage of grain. Pasturage is abundant. Apple picking continues. No damage has yet been done by frosts.

#### SACRAMENTO VALLEY.

The temperature has been above normal during the week. Light rain has fallen in nearly all sections; there has been sufficient rainfall to enable farmers to complete their fall plowing. Frosts have occurred in some places, but were too light to cause damage. Early sown grain is in excellent condition. Reports from nearly all the grain districts show that farmers are preparing for an unusually large acreage of wheat. Green feed is plentiful and stock are doing well. Olive picking is progressing. Oranges are coloring rapidly; shipments will commence during the coming week.

#### SAN JOAQUIN VALLEY.

Warm days and cool nights have prevailed during the week, with fogs in some sections. Frosts have occurred in a few places, but no damage has been done. Light rain has fallen in portions of the northern section, but not sufficient to be of material benefit. The soil is still too dry for cultivation in some portions of the valley, and farmers are waiting for heavy rain before beginning fall work; in other places the soil is reported in splendid condition, and plowing and seeding are in progress. Alfalfa is doing well. Pasturage is plentiful. A good crop of white figs is being packed. Orange picking and shipping continue. Olives are coloring.

#### SOUTHERN CALIFORNIA.

The weather has been warm and dry and has hastened the coloring of oranges and the ripening of the winter crop of lemons. Orange picking has commenced in some localities. Guavas are unusually plentiful and of superior quality. Late strawberries are in market. Raisins are all in the packing houses and large shipments are being made from San Diego. Pumping water for irrigation purposes has been resumed. Plowing and seeding are in progress in some sections.

EUREKA SUMMARY.—Soil is in fine condition. Farmers are busily engaged plowing and gathering apples, and in some sections sowing oats.

LOS ANGELES SUMMARY.—Feed is plentiful. Plowing is general in the northern sections; elsewhere the weather is hot and dry and no farm work is going on. There is a large demand for irrigating water, which keeps up well in some places.

#### Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Nov. 7, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week..... | Total Seasonal Rainfall to Date..... | Total Seasonal Rainfall Last Year to Same Date..... | Average Seasonal Rainfall to Date..... | Minimum Temperature for the Week..... | Maximum Temperature for the Week..... |
|----------------------|----------------------------------|--------------------------------------|-----------------------------------------------------|----------------------------------------|---------------------------------------|---------------------------------------|
| Eureka.....          | 1.32                             | 7.11                                 | 6.96                                                | 4.78                                   | 44                                    | 68                                    |
| Red Bluff.....       | .46                              | 3.61                                 | 3.28                                                | 2.73                                   | 46                                    | 78                                    |
| Sacramento.....      | .20                              | 1.68                                 | 4.66                                                | 1.78                                   | 46                                    | 78                                    |
| San Francisco.....   | .31                              | 1.95                                 | 4.20                                                | 2.00                                   | 47                                    | 76                                    |
| Fresno.....          | .00                              | .46                                  | 2.01                                                | 1.06                                   | 40                                    | 80                                    |
| Independence.....    | .00                              | .82                                  | .37                                                 | 1.10                                   | 32                                    | 72                                    |
| San Luis Obispo..... | .00                              | 1.89                                 | 3.92                                                | 2.18                                   | 40                                    | 66                                    |
| Los Angeles.....     | .00                              | .11                                  | 1.60                                                | 1.58                                   | 50                                    | 96                                    |
| San Diego.....       | .00                              | .28                                  | .42                                                 | .64                                    | 54                                    | 88                                    |
| Yuma.....            | .00                              | .02                                  | .08                                                 | 1.04                                   | 44                                    | 90                                    |



## THE POULTRY YARD.

### Chicken Catarrh.

As the season is at hand when head diseases of fowls are most prevalent, we are glad to find in a bulletin just issued by the Delaware Experiment Station a very full and satisfactory account of a disease which goes under several names and succeeds by any of them in causing great loss of fowls and concern to their owners. The account is by F. D. Chester of the station staff.

**GENERAL CONSIDERATIONS.**—Catarrh, in the sense in which it is here used, is an inflammation of the mucous membranes of the head, viz., mouth, throat, nasal passages and eye sockets, accompanied by the formation of a deposit, exudate or membrane upon the affected parts, which may accumulate to such an extent as to cause a discharge, or completely fill the cavity which the mucous membrane lines.

Thus when the inflammation affects the mucous membrane lining the nasal passages there is more or less redness of the latter, accompanied by a discharge from the nostrils, which discharge may become thickened so as to close the opening of the nostrils and obstruct the breathing. In the same way the mucous membrane lining the eye socket may be similarly affected and a watery fluid escapes which bathes the eyes, and which later may become thick like pus, eventually glueing the lids together.

This pus may furthermore become thick and cheesy, and accumulating in the inner corner of the eye socket produce a tumor-like mass which displaces the eye.

Again the inflammatory condition may affect the mouth and throat, extending to the larynx. In this case the mucous membrane is more or less reddened and covered with a deposit or exudate. This latter may be easily removed, or it may firmly adhere, any effort to remove it causing the underlying parts to bleed.

Catarrh is caused by bacteria finding lodgment on the mucous membrane which in their growth generate poisons that irritate the tender mucous surface.

The disease may assume two forms: Simple, non-infectious catarrh and malignant, infectious catarrh, or roup.

Our knowledge of these two forms of the disease is not sufficient to draw a sharp line of demarcation between them, inasmuch as their general manifestations are the same. In many cases one may be only a mild form of the other, in others the two seem to be quite distinct. Infectious catarrh is usually more malignant in its character, the symptoms more pronounced, the death rate greater, while its spread through a flock clearly points to its contagious nature.

**SIMPLE CATARRH.**—This disease is quite common among domestic poultry. The mucous membranes of the nasal passages are inflamed and thickened and exude a thin watery fluid which escapes through the nostrils. This latter may become thick and hard so as to entirely close the nasal openings and cause mouth breathing. The eyes may also become inflamed and watery, and later the lids become glued together with the viscid secretion. Catarrhal patches may also form upon the mucous membrane of the mouth and throat. The affected birds show general symptoms of illness, more or less severe. They are dull, have little appetite, and may show a roughened plumage. The birds sneeze, or the mouth breathing is accompanied by a wheezing or snoring sound. The principal predisposing cause of simple catarrh is exposure to cold, dampness and strong draughts of cold air. These influences may be further aggravated by insufficient nutrition and lack of exercise. It is, therefore, best prevented by keeping the birds in warm, tight houses, with good feeding.

For treatment, the mouth and nostrils can be washed once or twice a day with either of the following solutions—boracic acid 15 grains to the ounce of water, or a 1% solution of creolin. These solutions can be injected into the nostrils by using a small oil can, and a camel's hair brush used to apply the solution to the affected parts of the mouth or eyes. As a tonic Megnin recommends:

|                                                  | Drahms. |
|--------------------------------------------------|---------|
| Gentian root.....                                | 4       |
| Ginger .....                                     | 4       |
| Sulphate of iron.....                            | 2       |
| Hyposulphite of sodium.....                      | 1       |
| Salicylate of sodium.....                        | 1       |
| Pulverized and mixed; dose, 3 to 4 grains daily. |         |

**CONTAGIOUS CATARRH OR ROUP.**—To the ordinary observer this form of catarrh presents the same general appearances as the preceding, except that the disease is usually more severe in its manifestations, more fatal in its results, and more distinctly contagious, spreading from bird to bird with great rapidity. The discharges from the affected parts also have a decidedly offensive odor, which may be taken as a mark of diagnostic value. Another point of differentiation is seen about one or both eyes. The eye of the bird is set in a cavity which is considerably larger than the organ itself. The cavity, termed the orbital sinus, is lined with mucous membrane, which in roup becomes profoundly inflamed. The orbital sinus has

free connection with the nasal cavity, so that any inflammation of the nasal passages is likely to extend to the eyes. The inflammatory exudate poured into the orbital sinus becomes thicker and eventually cheesy in character.

Its accumulation forms a hard swelling, which either crowds the eye out of its socket or the inflammation may involve and entirely destroy this organ. When cut into, this accumulated exudate has a very offensive odor, which is quite characteristic. The swelling under the eyes, together with the offensive discharge from the nasal openings, is sufficient to distinguish roup from simple, non-infectious catarrh. An examination of the mouth and throat may also show the formation of patches of exudate, covering the floor or roof of the mouth, often extending to the larynx. These patches are sometimes easily removed, or they may form a false membrane, firmly adherent to the underlying surface.

It is clearly evident that roup is a contagious disease caused by a germ which infests the mucous membrane of healthy birds; that this germ is found in and disseminated by means of the discharges of the sick.

The control of the disease, therefore, is dependent upon the observance of the strictest hygienic measures. The sick should be immediately separated from the well, and the coops and roosts sprayed with a 2% solution of chloride of lime, the idea being kept in mind that all places which have harbored roup fowls are likely to be infested with the causative germs of the disease. If roup is prevalent in the neighborhood, any new stock should be kept by themselves for a period of thirty days to insure freedom from disease, and they should be kept by themselves for a period of thirty days to insure their freedom from disease, and they should be examined individually before allowing them to mingle with the healthy.

The sick which have been isolated should in the cold season be kept in warm, dry quarters, and given nutritious food containing a goodly portion of meat or fish scrap. Those that die should be immediately destroyed by burning or burial. Medicinal treatment can be applied if the value of the birds warrants it.

The swellings about the head and eyes should be opened, their contents removed and the wound freely painted with a solution of iodoform in ether. The affected mucous membranes should be treated by removing any visible exudate that can be reached, and then bathing the affected surface with some antiseptic solution.

Among these are creolin in 2% solution, or permanganate of potash, one grain to the ounce. Megnin has had excellent results with a solution of copper sulphate, of which a good strength is a 2% solution.

The antiseptic solutions may be injected into the nostrils or into the cleft in the roof of the mouth by means of a medicine dropper or a small oil can.

These solutions are too caustic to apply to the more sensitive eye, and for this boracic acid—15 grains to the ounce—is recommended. For application to the eye, wet a portion of clean cotton with the solution, which is gently held for a minute or so against the inflamed part.

## AGRICULTURAL ENGINEER.

### Good Roads Convention at Los Angeles.

The good roads cause in southern California received quite an uplift from the success of the convention held in Los Angeles last week under the auspices of the Chamber of Commerce. There was a very full representation of the scores of horticultural, agricultural and others industrial societies, and a central organization with branches in each of the seven southern counties was effected. The object of the organization is to keep alive agitation for the betterment of the public roads of the several counties and of the entire State.

The two days of essay reading and discussion of the convention yielded volumes of good words for good roads beyond our power of portrayal, but a few of what seem to us the most significant utterances may be cited.

**A LESSON FROM MASSACHUSETTS.**—H. A. French of Sacramento gave an account of what the old Bay State is doing. Up to the close of 1898 there has been little over 200 miles of roadway constructed and there were more petitions on file than ever before. The roadway constructed by the State, however, does not represent all that has been constructed in accordance with the commission's plans. The cities and towns themselves have taken a deep and increasing interest in the matter, and with money saved from the maintenance of roads that has been made a part of the State system, have built new roads for themselves. The lesson to be learned by California from the experience of Massachusetts in the matter of road building is that if good roads in the farming sections can be made to pay in a State where, because of frost and other natural conditions, the cost of construction is high they will certainly pay in a State where the cost of construction will be

generally low by comparison. The roads thus far built in Massachusetts have been at an average cost of about \$9000 a mile, but this is due largely to the fact that the commission has taken up the worst portions of main highways first and the high cost in mountainous portions of the State. Much of the road has been built at a cost of less than half the sum named. A first-class macadamized road will pay for itself in ten years out of what is saved from the maintenance fund. There is need of intelligent campaigning to convince the people that good roads are a permanent addition to the wealth of a State. Let but a few miles be built in California leading into the centers of farming sections, and every farmer who drives over them will become a good road enthusiast, understanding the value of the principle that too little money is spent upon construction of roads and too much upon maintenance, and the truth of the assertion that there is no investment by a community that will bring it so sure and so rapid a return as money intelligently spent upon good roads.

**FRONTAGE IMPROVEMENTS.**—George H. Dunlop of Hollywood, president of the Cahuenga Improvement Society, made a very interesting address on "Frontage Improvements in the Country." He stated that it was impossible for the County Supervisors to make all the road improvements that were needed in every part of the county. He believed that the supervisors of Los Angeles county were doing the best they could with the means at their command. The money appropriated was scarcely sufficient to make the necessary road repairs throughout the county, let alone new road construction. The citizens of the several localities which desired substantial improvements under our present system would have to make special provisions to that end. Mr. Dunlop advocated the extension of the Vrooman law or its equivalent to country roads, so that a majority of the property holders fronting on a road could assess themselves to improve it if they so desired. He thought the indorsement of this convention of such a scheme would carry much weight in securing the desired legislation. Mr. Dunlop's suggestions were received with much enthusiasm.

**WHEELMEN AND GOOD ROADS.**—Dr. O. S. Barnum read an excellent paper on "Good Roads from a Wheelman's Standpoint." He said in part:

"Conditions in southern California are somewhat peculiar, owing to the lengthy dry season, but it is not a drawback—rather the reverse. There can be no doubt that in this county, for instance, there is material available for building and keeping in repair first-class roads, cheaper than in almost any other State. At present our county highways are by law 66 feet in width, with perhaps 20 feet rounded up into a so-called road, 3 inches of mud in winter and 3 inches of dust in summer. The common cry here is 'lack of water.' Not so; it is lack of roads. Dirt and water make mud; it needs science mixed with these to produce good roads. I assert without fear of contradiction that a good macadam road from here to Santa Monica could be kept in perfect condition with one-tenth of the water and one-tenth of the expense for repairs now used on that thoroughfare.

"Wheelmen have learned two things; first, that the average country road in the United States is a parody on an ideal highway; second, that the value to a city population of reaching suburban and country districts comfortably is inestimable. They have practically demonstrated the truths in the theories of social economists touching these things.

"Wheelmen have a national organization, which has an enviable prestige before State Legislatures and Congress. They stand ready to assist any other organization, and in return ask help for the work proposed, thoroughly recognizing the economic value of good roads, and seeking solely 'the greatest good for the greatest number.' We want good roads, not for ourselves, but for the good of the nation; not for wheelmen, but for the people."

**ROAD ADMINISTRATION.**—Hon. Thomas O. Toland of Ventura spoke on "Local Government in Road Administration." Mr. Toland took the ground that the management of roads should be brought closer home to the people. He contended that such direct management as is exercised by the people of the common school districts would work with equal advantage if applied to the public roads. He called attention to the Act of the California Legislature, approved April 1, 1897, "for the establishment of a uniform system of road government and administration in the State," which he thought would have solved the road question in this State to a great extent, had the Supreme Court not held that the Act was repealed by the County Government Act, which was approved by the Governor on the same day.

**GOVERNMENT AID TO ROAD WORK.**—W. H. Moore of St. Louis called attention to the fact that the last Congress, which appropriated \$25,000,000 for river and harbor improvements, made an appropriation of only \$14,000,000 for the 3,500,000 miles of highways of the country. Yet 99% of the products of the country had to pass over these roads before they reached the railroad, river or harbor on the way to market. The reason why there was so much money spent by the Government on rivers and harbors, and so little on public roads, was because the people got behind the Congressmen and demanded of them that they get appropriations to be expended on harbor or



river work in their respective districts. The same power behind the throne could be exerted in behalf of good roads if the people organized for the purpose and brought the right pressure to bear on their legislators.

Reverting to the subject of highways, the speaker said there ought to be a practical road engineer at the head of the highway department of the State. Then there should be a road engineer at each county seat and an assistant engineer in each township. Under such direction road construction could be efficiently and economically carried on. The keynote of the whole situation was: First, organization; second, agitation; third, education; fourth, legislation.

The speaker believed that the next Legislature of this State would make a large appropriation for road improvement. There was a great movement all over the country in this direction, and what had already been done in Massachusetts, New Jersey, New York and other Eastern States in the establishment of a State system of highways could be done in this State as well; perhaps better, as damage by floods and winter's frost did not have to be contended with here.

**OILED ROADS.**—T. F. White of Chino, a member of the County Supervisors, read a paper on oiled roads and gave facts which many will be glad to know. Among other things he said; "In San Bernardino county we commenced using oil on our roads last year. It being an entirely new thing and none of the board having had any previous knowledge of applying oil to roads, we contracted to have the work done on from 25 to 30 miles. The idea was to keep the dust down; to use it as a substitute for sprinkling with water; and the contract called for a dustless road from the 1st of May to the 1st of December, the contractor agreeing to put on three applications of oil during the season. The results were, for the most part, satisfactory. But we have learned considerable since then, and are still learning. This spring we felt capable of doing the oiling ourselves, and put on one application during June and July, which has given better results than the three applications by the contractor last year. The contractor's idea was to keep the dust down, so that he used only enough oil to accomplish this; we have gone a step further, and while keeping the dust down we have attempted to build up a surface on the road that will take the wear of travel. To do this requires a generous supply of oil in the first application. It is economy in the ultimate result to put on all the oil in the first application that the surface of the road will take; the oil to be as hot as possible, from 200° up. We used from 100 to 150 barrels to the mile, and in places even more than that, applying it 16 to 18 feet wide. In putting on this quantity there were places that had too much oil, and other spots where chuck-holes had commenced to form that had not enough. These spots were gone over again. On spots having too much oil some dry dirt from the side of the road was thrown, or, if it was a graveled road, some fresh, screened gravel was sprinkled on; just enough to take up the surplus oil and no more. On the loose spots requiring more oil, additional oil was run, and with shovel or hoe and rake it was thoroughly mixed with the loose material entirely to the bottom of the hole. This then packed down from the travel. For doing this we have what we call a 'repair outfit,' a tank holding six to eight barrels of oil, set on a wagon gear, with a 2-inch hose 10 to 12 feet long, extending from the bottom of the tank, with a nozzle and cock on the end, and a cock on the outlet of the tank. The tank has a large opening on top, covered with a cap, through which can be lowered a bundle of brick or stone, heated by a fire alongside the road, for warming the oil, in case repairs are made in cold weather. One man and two horses can manage the outfit. It can be used in working over loose spots in the road when making the first application of oil, and subsequently in keeping the road in repair. The tools needed with it are a shovel, hoe and rake. Whenever a place in an oiled road commences to cut, the repair man should start with his outfit. In this way the road can be kept in good condition with comparatively little expense. The result of our experiment at Chino has been a road that is hard and smooth, and shows no appreciable wear after it has been down over a year. Many visitors mistake it for a bitumen road. A number of the storekeepers keep it swept before their places. This road has had three applications of oil since it was built, two last year and one this. The quantity put on this year was not more than about one-fourth that put on the first time."

**ROAD SPRINKLING.**—E. C. Crane of Saticoy, Ventura county, read a paper on "Road Improvement and Sprinkling." Referring to the necessity of sprinkling, as a means of keeping down the dust, the paper said: "To the farmer a good road means other advantages than its commercial or traffic value. For instance, a road in these southern climes is usually a dusty road, and a dusty road means serious damage to crops in adjoining fields. I know of instances in our county where the dust carried by the breeze onto the growing crops has injured them at least 50% of their yield and quality for a distance of from 300 to 400 feet. This loss on a walnut grove, at 10 cents per pound, and a Lima bean field, at 4 to 5 cents per pound, means a very serious loss to the farmer, and it could be easily estimated that such loss amounts to more than his proportion of tax

would be, to at once put into perfect condition his proportion of road.

Now, while sprinkling is a success to a degree, and is a vast improvement on the natural condition of roads. It by itself does not mean an ideal road. An ideal road, to be treated by sprinkling, should first be properly graded, elevations in centers varying according to the width of track required, and on sandy or light soil a surface of 3 to 4 inches of adobe should be spread, mixing it into the sand, and on an adobe road the reverse should be practiced. If all roadbeds were in this condition, I know of no better or more economical way of making good roads."

**STATE ROADS.**—J. L. Maude, Highway Commissioner of the State delivered an address on the subject of "State Highways." He said in part: "We have comparatively little difficulty in getting engineering service and skill for the construction of roads; it is not a question in California to-day whether we are going to oil our roads, or sprinkle, macadamize or gravel them. The first question is that of money. A great many people have gotten into the idea of getting after the Boards of Supervisors for their work on the county road. The general assumption is that sufficient money is given them to build roads with. This is erroneous; they simply have a maintenance fund, and if they can do a little permanent construction, besides maintaining the roads, it is that much to their credit."

Regarding the classification of roads, Mr. Maude cited France as an example of a country possessing a most magnificent highway system, their first principle being the classification of roads into national, departmental and district roads—a classification of which would be applicable to our own State, namely State highways, county and district roads, classified as such according to their necessities and importance. He cited the case of the Lake Tahoe road, now under State management, as a highway over which a great deal of travel passes, coming to the State at large, but which is of little local value to the county of El Dorado, through which the road runs. The speaker also pointed out instances in various parts of the State where short connecting roads cannot be built and maintained by the sections through which they pass, on account of the local sparseness of population, necessitating enormous waste of travel in going from one point to another.

"Now in these instances, where the counties are unable to build the roads, the State should step in and help them. I hold that the city of San Francisco, the city of Los Angeles and all of our centers of population are identified with and interested in the development of the country, because the country can live without the city to a certain extent, but the city is dependent on the country; the majority of our assessed valuation is in our own cities, and I therefore hold that your county can not tax your cities and distribute this money, but that the State should have a State tax, covering all municipal property, as well as other property in the State, and that it should be distributed back to the counties by the State according to their needs."

Mr. Maude contended that money raised and expended in this manner should go toward the construction and maintenance of State roads alone; that the less important roads, but those connecting important settlements in the country, should be designated as county roads, maintained by the county at large, while the smaller, or district roads should be maintained by money raised in the district traversed by them.

As further aid, the commissioner recommended the purchase of suitable road machinery, which could be loaned out to the poorer class of counties, unable to provide themselves with such, and in this manner road-building would be much encouraged, and the money that would have to go into expensive machinery could be put on the roads themselves. He recommended an ad valorem tax of 1½ cents on each \$100 of assessed valuation on all property in the State, for the construction of State highways, which would raise about \$180,000 a year, and figuring the cost of road construction at \$2000 per mile, about 90 miles of good road would thus be built per year. He pointed out the benefits that would be derived by such a system, in the increased valuation of country property and a resulting tendency to lessen the necessity for a tax on the city.

HE is not entitled to a patent who suggested the invention in dispute and made an experiment on a small scale, but did no more till another had devised it, obtained a patent and begun the manufacture. All inventions which are patented must be marked "Patented," together with the day and year upon which the patent was issued. In case of failure to comply with this law no damages can be collected. He is the real inventor, and entitled to a patent, who first makes a machine capable of useful operation, though others may have previously conceived the idea and made experiments toward putting it into practice.

THE Southern California Power Co., Los Angeles, Cal., has a 33,000-volt, 83-mile system. The Standard Electric project in central California involves the transmission of even greater voltage 150 miles. Under favorable climatic conditions there is no insuperable obstacle to successful transmission of 1000 H. P. over a wire 200 miles long.

## CORRESPONDENCE.

### San Joaquin Valley Activities.

**MODEL CREAMERY.**—To THE EDITOR: The Fountain City Creamery at Merced, described minutely in the PACIFIC RURAL PRESS about a year ago, has had a prosperous career. It has shipped 70,000 pounds of butter during the past year, besides cream to San Francisco. Its sales of butter being made largely in the mining counties, whence it goes by stage, this institution gets better prices than other creameries. It now has a skimming station at Amsterdam, a few miles east of Merced. At the two creameries about 6000 pounds of milk per day are now supplied. The Crocker estate is the largest patron; they milk 100 cows. The ice machine at this creamery is run every day, in which one charge of ammonia has been sufficient from the start.

**HONEY SHIPMENTS.**—The extent of the honey industry in this county is partially indicated by a shipment which was made from Selma on the first of November. It consisted of a consignment of three carloads, sent to one house in San Francisco. This honey was brought to Selma by members of the Bee Keepers' Association of Fresno County, an organization now numbering forty members. This association buys supplies for members and sells the product of the various apiaries on a uniform, co-operative basis. The price realized for the entire three carloads was 6 cents per pound. A large part of the honey brought in by O. L. Abbott and J. R. Stephens was almost water white and of fine flavor. It was made by bees from blue curl, a plant of the sage family, which blossoms in the fall. Previous to the above-mentioned shipment seven carloads of honey had been shipped from Selma the present season, in smaller lots.

**CITRUS FRUITS.**—The first carload of oranges to leave the Porterville district this season was shipped on the 26th of October. Although the fruit was not ripe, it was sufficiently matured so that it would reach its Eastern destination with good color. Between the first shipment and the gathering of oranges in dead earnest there has been a lull of ten days, and the fruit is being actively packed at this writing. The crop from Porterville, Lindsay and Exeter will this year be of unusual excellence and extent, as many young groves have come into bearing. Increased attention is being centered upon eastern Tulare county as one of the best orange districts in the State. The fruit is of superior quality, and, as has been demonstrated for several years, is earlier than southern California or Oroville. The lemons raised in this region are also establishing a character for themselves. The harvest of this fruit has been going on for several weeks, and at the time of the writer's visit to Porterville shipments were active. From 100 to 125 carloads will be shipped from Tulare county this season. As to oranges, the Earl Fruit Co. alone will ship from 125 to 150 carloads. At their packing house in Porterville two of the largest graders in the State have been completed. They are 18 feet long and are run by electric power. The establishment will employ seventy-five packers and assistants. A. Gregory, the other leading shipper at Porterville, will send out seventy-five carloads of oranges from Porterville and forty from Lindsay. Dalton Bros. of San Francisco will probably enter the Porterville district as purchasers the present season.

**DECIDUOUS FRUITS.**—The deciduous fruit crop in Tulare county has been quite satisfactory to growers the present season, and shipments will exceed those of any other year. At Visalia, the Downing Fruit Co. will pack seventy carloads of prunes, twenty of peaches and eight of assorted dried fruits; they shipped twenty-five carloads of fresh fruits during the season. Castle Bros. will ship seventy-five carloads of dried fruits, three-fourths of which will be prunes; this company does not handle raisins in Tulare county. J. K. Armsby & Co. will pack sixty cars of prunes and other dried fruits. Fleming & Jacob were allotted seventy-five cars of prunes by the Association, but they will probably pack 100 cars; they report an excess of the large sizes in prunes, which is something characteristic of the Visalia district. The cannery at Visalia (No. 18 of the Association's plants) put up 60,000 cases of canned goods during the season, the bulk of which were Orange Cling peaches; no apricots were canned this year.

At Tulare, Cartmill's packing house will receive and ship to the packing houses at Fresno and elsewhere twenty-five carloads of raisins and prunes. Irwin & Scott, at the same place, receive and stem raisins for Rosenberg Bros. & Co., who are outside the Association; they have already shipped several carloads of prunes. At this warehouse the Earl Fruit Co. received and shipped about forty carloads of fresh fruits in season.

Griffin, Skelley & Co. have packing houses at Dinuba and Sultana. They will ship 100 cars of raisins, forty cars of assorted dried fruits; they purchased and shipped to the cannery at Fresno thirty carloads of fresh fruits during the season.

**THE DAIRY.**—Dairy and stock interests are not languishing in Tulare county. There is manifest a



spirit to improve the grades, both of beef cattle and dairy stock. Two or three high-grade Hereford and Durham bulls have been imported by the more wealthy stockmen. The efforts of the San Joaquin Ice Co. (which institution has extensive dairy interests) to improve dairy stock have already been alluded to in this journal. They have scattered a large number of choice young heifers from Humboldt county or from Oregon among the dairymen of Tulare. The skinning station of this company at Visalia has more than doubled the number of its patrons during the past year. It has received as high as 8000 pounds of milk daily from sixty patrons; there are now forty-two patrons, and the dry season being still on, the milk supply has dwindled to 4000 pounds daily. W. B. Cartmill's creamery at Tulare has eighteen to twenty patrons, who supply 2000 pounds of milk daily. The cream from this institution goes to Los Angeles. H. R. Peacock's creamery at Traver is also flourishing, and is now the one establishment of that place which helps to keep vitality in the settlement.

**CITRUS FAIR.**—The coming Citrus and Twenty-fourth Agricultural District Fair at Tulare City, during the week from Nov. 26th to Dec. 1st, is attracting wide attention, and judging from the local interest aroused, and the preliminary preparations so far completed, it will be a great success. The eight counties of Tulare, Kern, Kings, Fresno, Madera, Merced, Stanislaus and San Joaquin are to be represented, and they will do things in no half-way style.

Tulare, Nov. 4, 1900.

### The Ruins of Mitla, Mexico.

Oaxaca, Mexico, is not only a rich country from a mineral standpoint, but is one of the most attractive to the tourist. In the valley of Tlacolula, 20 miles

Mexico, lying to the northwest. Situated as they are between these historic points, it is supposed by some to be a connecting link. Travelers and explorers who have visited all these old relics of by-gone days, and have spent weeks and months in their study, find that Mitla stands alone, conspicuous for its singularities of architecture and ornamentation.

Bancroft, the eminent antiquarian, says in "Native Races of the Pacific Coast:" "Mitla is probably the finest group in the whole Mexican territory. Here was a great religious center, mentioned in the traditional annals of the Zapotecs, the original name of which seems to have been Lioba, or Loba, the place of tombs; called by the Aztecs Miquitlan, Mictlan or Mitla, (place of sadness), dwelling of the dead, often used in the sense of hell. The gloomy aspect of the location accords well with the dread significance of the same. A stream with parched and shaded banks flows through the valley; no birds sing or flowers bloom over the remains of the Zapotec heroes."

The ruins are in five groups; three of them are well preserved and attract the most attention. One group is about 120x100 feet, with walls standing 15 to 18 feet high, enclosing a large court, or patio; around this patio the walls are laid off in oblong panels, built in the most unique designs in bas-relief, mosaic in character. The largest group is about 300 feet long by 110 feet wide. The walls are about the corresponding height as those described above, and about 6 feet thick. They have the same character of mosaic decoration, but different in design, each panel being unlike any other in the ruins. Sculptured columns or frieze are conspicuous by their absence, and that is one of the marked differences between these and other ruins in Mexico. The walls of Mitla are built of a most peculiar design, being formed of small pieces of stone from 1 to 6 inches in length, 1 inch in depth and 2 inches in breadth, very accurately cut

In 1802 Don Luis Martin and Col. De le Languna visited these ruins and gave to the world the first sketch ever made of them, from which the illustrations used in the past have been made. In one of these ruins is an underground passage or chamber, and referred to by the guide as the "subterraneo." In shape it resembles a cross. Leading from this passage, somewhere in the ruins, great treasures are hidden; and it is claimed that their exact location is known to one old Indian, who occasionally, when unobserved by his neighbors, extracts therefrom sufficient to maintain an humble existence. It is also said that in one of these ruins is a large room filled with mummified bodies of the Aztec kings. Whether this be true or not it would be hard to say, but such explanations from the guide who accompanies all visitors are not disputed, as it would be in keeping with the general surroundings, and one feels as though it were true. Tourists in visiting Mitla in the past have disfigured the beautiful walls by chipping off pieces. The Government has taken the matter in hand, and now no one is allowed to enter the ruins without a guide, who sees that no further destruction occurs. The lintels of some of the doorways are of mammoth blocks of stone, one of which is 19 feet long, 3 feet thick and 6 feet wide. Just how these monster blocks were raised to their present positions is a matter of conjecture. Like the massive blocks found in the pyramids of Egypt, no one can form a theory that will satisfy the inquiries of to-day as to the method used.

In one of the large rooms is a long row of columns, standing in perfect line; these columns are about 14 feet high and 3 feet in diameter, and are peculiar in themselves, having no base or pedestal, capital or architrave. In the patio, at the entrance of this room, stand two of these large columns. In September, 1899, Martin Gonzales, the present Governor of Oaxaca, removed one of these columns and placed it in the Passao, to add to the attractive features of



Prehistoric Ruins of Mitla, Oaxaca, Mexico.



Detail of Mosaic Wall, Ruins of Mitla.

southeast of the city of Oaxaca, are to be found the ruins of Mitla, looked upon by all scientists who have visited them as the crowning achievement of an ancient and vanished people. Just when Mitla was built or by whom nobody knows. The ruins were discovered by the Spaniards who invaded Mexico in 1521, when all records found were destroyed. They are now just as they were then; 379 years has not made the slightest change. The building of the Mitla had its birth so far back in the twilight of time that naught but tradition remains. Among the Indians who inhabit the hamlets adjacent to the ruins traditions are rife. The inhabitants of these villages are descendants of the Zapotec Indians, and they claim that at one they were a great and powerful people, and that Mitla was the dwelling and burial place of the Zapotec kings.

The ruins of Mitla are peculiar to themselves, being of stone; they partake of no known civilization and have no likeness either to the ruins of Yucatan, which lie to the northeast, or of those in central

and built into the face of the wall, forming most complicated patterns that baffle description. These mosaics, all the figures of which are rectangular or diagonal, give the distinctive character to Mitla that distinguishes it from all others. The engraving on the front page, giving the detail of appearance of this wall, built of mosaic, is the first time any such picture was ever published.

At Yucatan the hand of the sculptor has left its imprint, that has lasted from time immemorial to the present, and makes them attractive to the tourist, who makes long pilgrimages to view them. Palenque is visited by thousands to view the relics of the ancient sculptor, made famous for its odd designs in stucco in bas-relief. Copan is visited by scientists, archaeologists and tourists to study its idols and altars—upon the discovery of which and the stupendous work achieved by a people now extinct volumes have been written. But, after a careful study and investigation of them all, Mitla stands out in bold relief in the minds of all who visit them.

this drive. The removal was accompanied with no end of objections from the inhabitants of Mitla, and to maintain order it was necessary for the presence of a battalion of soldiers under stern leadership to effect the desired object.

All tourists are beset by a score of little Indian girls offering for sale pieces of Aztec pottery, faces of idols and beads, said to be found in the ruins and uncarved during the excavations done there some years ago under permission from President Diaz. It is remarkable how keen the sense of business is in these forlorn Indian children, who evade close questioning as to where they were found or how they came into their possession, as nothing that would lead one to believe they were genuine can be seen in the surroundings; nowhere is there the semblance of the handiwork of the sculptor to be found in these vast ruins; which makes it suspicious. These articles are often bought by visitors as mementoes of the trip, regardless of their genuineness as antique relics.



## Agricultural Review.

### ALAMEDA.

**SHIPPING PRUNES.**—Niles Herald, Nov. 2: There have been four carloads of prunes, which were packed at the E. A. Ellsworth drier, recently shipped from this point. Two cars went to Chicago, one to Richmond, Va., and one to Boston, Mass. There are about five carloads more to be shipped.

**PRIZE WHEAT AT PARIS EXPOSITION.**—Livermore Herald: Several times last year we referred to the excellence of the white Australian wheat grown on the Martin ranch. It was grown from wheat obtained through F. R. Fassett, president of the Livermore Warehouse Co., from the Palouse district in Washington. Manager Carneal sowed the wheat on adobe soil, which had been alternately seeded and pastured for several years, the ideal condition for wheat growing on adobe soils. The growth was exceptional and the grain was considered to be the finest ever grown in the valley. The grain was tested at the University and was pronounced to be the richest in nitrogenous matter of any California wheat ever tested. The attention of dealers has been attracted to it and only last week Mr. Carneal sold a carload of the grain for seed to a San Francisco grain dealer at \$1.10 a hundred in Livermore. But the most satisfactory endorsement by far has come to Mr. Carneal in the shape of the grand prize from the Paris Exposition.

### EL DORADO.

**EVERYBODY HAPPY.**—Correspondence El Dorado Republican: It would be hard to find a grower in Blair's District at this time, especially among the farmers. A bountiful harvest, an abundance of all kinds of fruit, on most of the ranches that raise fruit, late frosts, fine weather, and, until the last rain, good roads; so you see it would be pretty hard for them to find anything to growl about.

### FRESNO.

**CATTLE FROM ARIZONA.**—Fresno County Enterprise, Nov. 1: Clarence J. Berry, T. B. Matthews and Fred C. Berry returned Saturday from Nogales, Arizona, where they invested largely in cattle, having purchased in all 1250 head. They will return to Arizona about the 5th prox., when the cattle will be shipped here, unloading at Kingsburg.

**RAISINS PILING UP.**—Fresno Republican: The directors of the California Raisin Growers' Association and the representative directors of the Packers' Company have held a session in reference to a plan for stemming out the rest of the raisins left in the sweatboxes in order to relieve the sweatboxes and enable the growers to get their crop under cover. This has been a very remarkable season for drying, and the result is that raisins in the sweatboxes have accumulated at the packing houses. The packers have been careful not to pack more than their allotment, and hence the raisins have been held in the sweatboxes, while many small growers need the sweatboxes to deliver the rest of their crop. It is understood that an agreement has been arrived at and that final arrangements are being made. This will necessitate a temporary stoppage of the advance payment to the growers who need their sweatboxes, but a plan is being considered whereby they will receive a certain advance. Other growers will not be effected and will receive their advance payments as usual.

### LOS ANGELES.

**POMONA OLIVE CROP.**—Pomona Times, Oct. 31: So many acres have been planted to olives, and so many miles of street lines have been planted to the same in this valley, that the crop of olives is larger than one would estimate from a casual look at a few orchards. We know of but few trees that bore a full crop this year, and believe the great majority have not borne enough to make it an object to pick the fruit, and yet the local crop will amount to many thousands of gallons. Last year Augustine W. Wright's crop amounted to 23,000 gallons; he is not yet able to make

an accurate estimate of this year's crop. He states a very curious fact in that a few of his trees which have received good cultivation, but no irrigation this or last year, have on the average as large crops and as large berries as those which had plenty of water. He realizes that the olive tree requires as good care as any other fruit tree to insure good results. P. J. Dreher will have about 800 gallons of olives from street trees bordering his orange orchards. He is not in the olive business, but, having the trees, he is giving them the same good care he does his citrus trees and gets crops of choice fruit. He says, to secure crops, the trees must have the care in all respects that is given to the best orange trees.

**GREAT CROP OF ORANGES.**—Pomona Times, Oct. 31: A ride through the orange orchards will soon convince any one of the great quantity and high quality of oranges this year. The fruit is smooth and of good size. It has been hard for the growers to see the blessing of the years of drouth, but it is certain nicer oranges were never grown. One of the finest orchards we have seen is J. A. Woy's ten acres on East Holt and Kingsley. There are about 900 trees that last year yielded 5700 boxes of fine oranges and this year will yield probably over 8000 boxes of handsome fruit. Every tree on the place is carrying its share, so that an immense number of props have been necessary. Over \$270 worth of props and cord were put in this year. This has not been accomplished without much expense and labor. Stable manure, as well as fertilizers, have been applied liberally, and most thorough irrigation and cultivation been given the soil.

**RANCH TRANSFER.**—Pomona Progress, Nov. 1: S. L. Gross has sold his thirty-acre orange orchard and residence at La Verne to S. F. Owen for \$15,000. Mr. Gross takes Mr. Owen's residence at the corner of San Antonio and Kingsley avenues as part consideration.

### MONTEREY.

**CHERRY TREE IN FULL BLOOM.**—Monterey, Oct. 29: L. Piazzoni reports an interesting natural phenomenon on his fruit ranch at Tulareitos, a few miles from this place. It is a cherry tree in full bloom, and the oddity as well as beauty of such a sight at this time of the year is attracting a great deal of attention among the people in the neighborhood. None of the adjacent trees show any signs of blooming at present, but the one that has blossomed seems healthy and vigorous. Unless heavy frost mars the promise of its many blossoms, it will prove a refutation of the time-honored proverb that "cherries are not gathered at Christmas."

**SATISFACTORY BEAN CROP RETURNS.**—Salinas Index, Nov. 1: Sprockels bean men are in good spirits. Joseph Albright has finished threshing his crop and will have about 1200 sacks of Small Whites and 1040 sacks of Pinks. The Whites are worth \$3.50 per 100 pounds and the Pinks \$1.90. Thomas Chappell sold his Large White beans at \$2.50 and his Small Whites at \$3.50. Over 2000 acres of land east of Sprockels, upon which beans could not be raised this season for lack of rain, were planted to beans. The whole tract has averaged about twelve sacks to the acre. A few acres yielded as high as twenty-three sacks to the acre. The Small White and Lady Washington beans are in demand at good prices, while Pinks and Reds are off in price and demand limited. The beans are plump and of choice quality. Messrs. Willoughby, Thompson, Weaver, Brown, Frietas, Seaman, Storm, Tillman, Hutchings, Bentley and other bean farmers at Sprockels and on the Buena Vista have had good returns for their work.

### NAPA.

**WINE CELLAR DESTROYED.**—St. Helena Star, Nov. 2: Rennie Bros.' stone wine cellar, near St. Helena, was gutted by fire Wednesday. It is not known how the fire caught, but was probably the result of children playing with a lighted candle. There was no wine in the building, but 100,000 gallons of cooperage, a splendid wine making machine and thirty tons of hay were totally destroyed, making a loss of between \$5000 and \$6000. The stone walls were not injured.

### SAN BERNARDINO.

**PRICES FOR BEETS.**—The American Beet Sugar Co. of Chino has mailed the following circular to beet growers: "The American Beet Sugar Co., Chino, will pay the following prices for beets, to be contracted for now, for the crop of 1901, as shown by the following extract from the contract of 1901: 'All sound beets to be bought and paid for by said factory at the following rates: Beets not weighing over five pounds, and testing not over 15% of sugar, \$4.25 per ton; with an addition of 25 cents per ton for each 1% of sugar above 15%; fractions in proportion. Beets weighing over five pounds, \$4.25, when testing 15% of sugar, with an addition of

25 cents per ton for each 1% of sugar above 15%; and a deduction of 25 cents per ton for each 1% of sugar below 15%; fractions in proportion.'" Except upon land that can be irrigated, seed will not be furnished until sufficient rain has fallen to insure a crop. Price of seed, 12 cents per pound, to be deducted from price of beets first delivered. Railroad freight will be paid by factory when cars are loaded to full capacity.

**LARGE REAL ESTATE DEAL.**—San Bernardino Times-Index, Nov. 2: The Consolidated Abstract and Title Guaranty Company of this city has filed with the County Recorder several documents that disclose one of the largest land deals of the year. Two of the papers referred to are deeds, whereby the Cucamonga Fruit Land Company and the Cucamonga Land and Improvement Company convey to the Italian Vineyard Company 1235 acres of land in sections 23, 24 and 25, in township 1 south, range 7 west, and which includes what is known as the townsite of South Cucamonga, and lands adjoining. It is reported that the Italian Vineyard Company is an organization with ample capital, and that a large part, if not all, of the newly acquired territory will be planted at once to wine grapes. The land purchased is all good tillable land. A large part of it has never been improved. There are already a large number of vineyards near Cucamonga and the grape growing industry has proven very profitable for the growers. The consideration, as calculated by the Internal Revenue stamps, is \$27,500.

### SAN LUIS OBISPO.

**THE J. C. BAKER PLACE SOLD.**—San Luis Obispo Tribune, Nov. 2: The J. C. Baker place, near Cambria, has been sold. The purchaser is B. Corda, who has lived in that vicinity for a number of years. There are about 280 acres in the tract, and it is understood that the price paid was \$8500.

**BEANS IN DEMAND.**—Oracle: "How would you like to be the iceman?" will soon be changed to "How would you like to be the bean man?" if the rise in prices continues. As high as \$3.52 for Small Whites has been paid producers.

**PLOWING BEGUN.**—San Luis Obispo Tribune, Nov. 2: J. H. Hollister informs us that a number of farmers in his vicinity on the Corral de Piedra have begun plowing. Mr. Hollister has about 100 acres plowed, and he states the "doby" is just in the right condition to work up well. The indications at present are that the acreage put in crop in his vicinity will be larger than that of last year.

### SANTA CLARA.

**THE HISTORIC LICK MILLS.**—San Jose, Nov. 2: There is prospect of the old historic Lick mills property being converted into a fruit cannery. This property lies near Alviso and is known far and wide as the building erected by the eccentric millionaire, James Lick, for a flour mill. In fulfillment of a promise made in early life, to have a finer mill than that of the father of a girl who had once refused him his daughter, James Lick erected this building, using the most elegant wood finishing possible to be obtained at that early day. After it ceased doing duty as a flour mill it was converted into a paper mill. It is now being looked over by a prominent Oakland capitalist, with a view to making a fruit canning establishment out of the old but well-built structure.

**PRUNES MOVING SATISFACTORILY.**—Morgan Hill Times, Nov. 2: The Prune Association is going ahead quietly, handling the crop of the growers, and there appears to be no question that the entire crop will be disposed of at Association prices. In the meantime outside growers continue to come in, and during the week just closed about 500 acres of prune orchards have been contracted for by the Association.

**PRUNE WAREHOUSE DESTROYED.**—San Jose Mercury, Nov. 3: A fire near Berryessa early Friday morning at the ranch of Mrs. A. Armetta destroyed much property. The fire was in a warehouse which was filled up with dried prunes. Two hundred tons of dried prunes, the warehouse building, newly erected this year, a grader, trays, boxes and other equipments were destroyed. The loss was \$15,000; partially insured. Mrs. Armetta loses practically the entire crop of her orchard, the biggest one it has ever produced.

**FIRE IN THE COUNTRY.**—San Jose Mercury, Nov. 3: A large barn and stable belonging to Harry Agnews on the Agnews Stock Farm was destroyed by fire early yesterday morning. A valuable trotting mare, 225 tons of hay, farm implements, harness, buggies and sundries were destroyed. The barn and hay were insured for \$3400. Two years ago a fire on the same ranch destroyed another barn and burned several of the Agnews

string of thoroughbreds. At that time Harry Agnews' father, now deceased, came near losing his life in attempting to rescue a stallion.

**PRUNE SALES.**—San Jose Mercury, Nov. 1: According to the best estimates, taking averages, only about one-quarter of the prune crop has been disposed of. President Bond says that only about one-quarter of the crop in the hands of the association has been placed. This means that the sum distributed and the total of present dividends will aggregate between \$700,000 and \$1,000,000. And this is but 25% of the crop controlled by the association. It is, then, a pretty safe guess to say that the total receipts for the prunes controlled by the association will run somewhere between \$3,000,000 and \$4,000,000. It must be remembered that this is for prunes alone. All this money does not come to Santa Clara county. But stop and consider the many carloads of dried apricots, peaches and pears, and the carloads of table grapes and other fruits sent out of the county, one begins to have some idea of the enormous exports. It means, then, that millions of dollars come into Santa Clara county through the fruit industry to be distributed among the people annually.

**APRICOT PITS.**—Solano Republican: Ernest Luehning has finished cracking 100 tons of apricot pits, for which he paid from \$10 to \$12 per ton. The pits were cracked by F. C. Chapman of Los Angeles. The hulls have been sold for fuel to the Suisun Electric Light Works, and the kernels will be used in the manufacture of prussic acid and other articles of commerce.

### SONOMA.

**CREAMERY IMPROVEMENTS.**—Sonoma County Farmer, Nov. 2: Victor Piozzi has put in a new separator with a capacity of 1750 pounds of milk per hour. Under a practical test 2000 pounds were handled in sixty minutes. Milk is bought from the neighbors. Louis Pedrotti of Stony Point has also put in a new separator of 3000 pounds capacity and is buying milk.

**WOOL SALE.**—Cloverdale Roveille: The fall wool sale is announced for Thursday, Nov. 15th. Most of the wool is already on storage and next week will see about all the clip here. The output this fall is large and the wool of excellent quality, and all that is wanting to make wool men happy is good prices.

### TULARE.

**NEW CROP ORANGES.**—Porterville Enterprise, Nov. 2: A trainload of Globe oranges, drawn by Young Bros.' traction engine, was brought down to Roth Spur Monday for shipment. One car of the fruit went to San Francisco, and was the first from here to that point. The oranges were of fine quality.

### VENTURA.

**BEANS AND WALNUTS.**—The Ventura county bean crop will yield between 125,000 and 250,000 bags. The yield last season was 160,000 bags. Forty thousand bags of Limas have been already shipped. The present fruit season, closing Nov. 1, has been exceptionally prosperous. Walnut shipments aggregate 450 cars, worth f. o. b. \$800,000.

### YOLO.

**FATTENING ARIZONA CATTLE.**—Davisville Enterprise, Nov. 1: In last issue we made mention of the arrival of a trainload of cattle from Arizona that were unloaded here and sold to D. H. Murphy, who resides 40 miles above Colusa City. A second trainload arrived Monday; about half of them were sold at Suisun, the remainder were placed on Dr. Burnett's pasture. Another trainload is on the way to this place. Davisville bids fair to develop into a prominent shipping point for large numbers of cattle unfit for beef. Stock raisers of Arizona and parts of Texas are often compelled to ship their cattle to other sections to fatten. These wild cattle have been given by novel writers a nature similar to the wild Comanche Indians, but they are very readily driven and handled by horsemen.

## Horse Owners! Use GOMBAULT'S



## Caustic Balsam

A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRCING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.  
THE LAWRENCE WILLIAMS CO., Cleveland O



## A Lame Horse

is neither valuable for use or sale. It is better not to have a lame horse.

## Tuttle's Elixir

cures permanently all forms of lameness, curbs, splints, sprains, thrush, &c. Equally good for internal use for colic, founder, pneumonia, distemper, &c. Guaranteed to cure.

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Beware of so-called Elixirs—none genuine but Tuttle's. Avoid all blisters; they offer only temporary relief if any.



## THE HOME CIRCLE.

## Labor and Life.

How to labor and find it sweet,  
How to get the good red gold  
That veined hides in the granite fold  
Under our foot,—  
The good red gold that is bought and  
sold,  
Raiment to man and house, and meat!  
And how, while delving, to lift the eye,  
To the far-famed mountains of amethyst,  
The rounded hills, and the intertwist  
Of waters that lie  
Calm in the valleys, or that white mist  
Sailing across a soundless sky.

—James Horbort Morso.

The longer on this earth we live  
And weigh the various qualities of men,  
Seeing how most are fugitive  
Or fitful gifts at best, are now and  
then—  
Wind-wavered corpse lights, daughters of  
the fon—  
The more we feel the high, stern-featured  
beauty  
Of plain devotedness to duty,  
Steadfast and still, nor paid with mortal  
praise  
But finding amplest recompense  
For life's ungarlanded expence  
In work done squarely and unwasted  
days.

—James Russell Lowell.

## A Detective's Adventure.

"I am in rather an awkward position," said the visitor, slowly, "and I want you to extricate me. I am very confident of your ability to do so, because of the successful way in which you solved the Workingham mystery."

"If you will state your case I will give it my attention," replied Desmond, ignoring the compliment.

"Then you'll come with me to my home?" went on the other, who had given the name of Phillips. "All my documents are there, for, not counting upon a refusal, I did not bring them."

"What is the distance to your house?"

"Three miles or so. I have a cab outside."

The Jehu evidently knew where to drive, for no instructions were given him before the two entered the vehicle. Phillips relapsed into silence nor did he speak again until the cab drew up to the door of a large brick house, situated in a street that Desmond did not remember having seen before.

"Here we are," he said, ascending the steps and throwing open the door.

## PITY AND BEAUTY

The most beautiful thing, in the world, is the baby, all dimples and joy. The most pitiful thing is that same baby, thin and in pain.

The dimples and joy have gone, and left hollows and fear. It is fat that is gone; gone with it, comfort and color and curve; all but pity and love.

The little one gets no fat from her food: has had none for weeks: she is living on what she had stored in that plump little body of hers. She is starving for fat; it is death; be quick!

Scott's emulsion of cod-liver oil is the fat she can take. It will save her.

We'll send you a little to try if you like.  
SCOTT & BOWNE, 409 Pearl Street, New York

"Follow me." And Phillips led the way along a dimly-lit passage and entered a cosy room at the other end.

"Now that you have brought me this long distance you will kindly give me the facts of your case at once," said Desmond, sharply. "I may say frankly that I do not like this secrecy."

"You are safe in our hands," said the other. "There is no need to be afraid." Desmond noticed the plural. "You are not alone then?" he said, with a quick glance around the room.

"By no means. I have a few friends here." He touched a bell as he spoke and four men entered the room. The detective was startled, but he did not show it.

Phillips burst into a laugh. "Draw your chair up to the table and take a cigar," said he.

The others all proceeded to make themselves comfortable, so the detective proceeded to do likewise; so far as he could see there was no cause for alarm.

"Now, sir," began Phillips, "I must tell you, first of all, that you are not required to solve any real case of mine. I and Mr. Smithson have made a bet regarding you. We were talking the other day about the Workingham affair, and as I said, you had found the truth very cleverly, he remarked that circumstances were greatly in your favor. We began to argue with this result. We have imagined a case and wish you to solve it. We shall tell you a story and act part of it. If you succeed in proving to our satisfaction who the murderer is—for the case is one of murder—you will receive the sum of £100. If you fail, you will receive £10 for your trouble. What have you to say?"

"I do not like being made the subject of a bet," said Desmond.

"You must go in for it," put in Vernon. The almost pleading tone caused the detective to look more closely at his pale, thin features.

"Very well, then, I agree," said he, and his eyes still upon the other's face he thought an expression of relief crossed it.

"Thank you," said Phillips. "We will start right away. It has been decided that I tell the first part of the story. Last night I and Lovely there entered this house at ten o'clock. I called Smithson up from his chemical laboratory in the basement, and Walters from his portion of the house, and we awaited the appearance of Vernon and Jackson. But as these two failed to come after ten minutes had passed we all went upstairs to Jackson's room. There a dreadful sight met our gaze. He was lying dead upon the floor, and close by was Vernon, just recovering consciousness.

"It was plain that Jackson had been murdered and all things pointed to Vernon, as the one who had done the dastardly deed. He had been stabbed by the latter's knife. We formed the idea that he himself had been knocked senseless by a blow upon the head, dealt by the dying man in a supreme, final effort. We charged Vernon with the crime, but he denied it, but you shall hear his explanation from his own lips, Mr. Desmond."

"At nine o'clock," began Vernon trying to keep his own voice steady, "I entered the house at the front and proceeded straight upstairs to Jackson's room, having to see him upon a purely private matter. There was no one about that I could see; indeed, everything was so quiet when I opened the door that I thought Jackson himself must be out. But as I went inside quick footsteps sounded behind me. I was about to turn when I received a crushing blow upon the back of the head. I staggered forward, caught a glimpse of Jackson lying on the floor in a pool of blood, and then fell down senseless, to awake some time later and find myself accused by you gentlemen as his murderer. But I am innocent, I swear it."

He made this declaration so earnestly as to call forth sarcastic comments from Smithson.

"Have you anything more to say?" questioned Phillips. "Can you account for the fact that your knife caused Jackson's death?"

"I cannot. Until it was shown to me as the one used, I had not seen it for a week," replied Vernon with emphasis.

"That will do. Now, Mr. Desmond, you have heard the main facts. Circumstantial evidence of the strongest kind is brought against Vernon. His story is a simple one. Can you prove his guilt more conclusively, or establish his innocence? You may ask any questions you please."

"Had Vernon any motive? Had Jackson ever quarreled with him, Smithson, or Walters?" said Desmond, after a moment's thought.

"He had quarreled with both me and the accused," put in Smithson, rather sullenly.

"Did you see Jackson last night?" asked the detective turning and looking at him.

"Me? Yes, but I left him well and hearty at about ten minutes to nine, and proceeded downstairs to my laboratory. Jackson looked at his watch and gave me the time."

"Walters can be left out of it," thought Desmond. "It rests between Smithson and Vernon."

"Have you any more questions to ask here? If not you shall see the position in which we found the two men," said Phillips.

"I have no more questions at present," was the reply.

"All right. Vernon, you and Lovely go upstairs and get ready for the parts you are to play. You understand what to do. Knock when ready."

The men addressed arose and left the room, Vernon giving a backward glance that puzzled the detective.

"I think they will be ready for us shortly," said Phillips. This sort of thing is rather nerve-shaking. Smithson looks really ill."

"Do you mean to accuse me of—?" began Smithson.

"Of poor nerves?" put in Phillips, with a warning glance at the other. "Oh, no. You look white and troubled, that's all."

"He wants some of his own drugs," said Walters, with a forced laugh. "Come, come, don't get to words. Listen. Vernon is knocking. He is awaiting us."

Phillips put down his cigar and led the way upstairs, the others following. "This is the room," he said to Desmond. "Lovely is in the position we supposedly found Jackson. Enter, please."

The detective did so. He could not suppress a start of surprise. There, lying upon the carpet, was Lovely, attired in a brown check suit. His arms were outstretched; his face fixed as if in death. A small, blood-stained knife and a heavy knobbed stick were by his side. The affair seemed too grim to be mere play.

"Vernon will show us how he entered the room," said Phillips. "This may seem unnecessary, but it is his own wish. Perhaps he wants to do a bit of realistic acting. Ready, Vernon?"

"I am." The man having first turned the gas low, proceeded to the door and closed it behind him. After a moment's wait, he opened it again and, stepping inside, spoke as to himself; "Evidently Jackson's out. I'll go downstairs and await his return. The business—"

He stopped suddenly and made as if to turn. To the watchers it was as if some unseen person had struck him an unseen blow. He uttered an exclamation, half of terror, as he staggered toward the center of the room. "My God," he muttered, as he came to the body of the pseudo-Jackson; then he fell down in a dead faint. He had gone too far with his acting. This latter was reality.

"He's overdone it," cried Phillips. "Fetch water. Here, Lovely, get up and help."

In a very short time Vernon opened his eyes and glanced quickly around. The others had their attention elsewhere for a moment. "Bend down, quick," he whispered, just loud enough for the detective to hear. "Save me, for God's sake. Save me. It is—"

"Here you are," shouted Lovely, running up with the brandy. "Pour it down his throat. Now help him on the couch."

The whispered words of the prostrate Vernon had brought the detec-

tive to the conclusion that there was something behind all this; what at present he could not imagine. He saw that the best thing to do would be to proceed as if he suspected nothing. So, with a jesting remark, he proceeded: "Where was the supposed Jackson stabbed?"

Lovely pointed out the place. "But a stab there would not be fatal," said Desmond.

Phillips frowned sharply at him. "He bled to death," he said. "You will understand that a large quantity of blood would flow from such a wound."

"Certainly, certainly. I suppose I can examine his clothes?"

"There is absolutely nothing in any of the pockets. No clue is to be found there."

"Nothing whatever? This is the watch Mr. Smithson referred to, I suppose?"

"Yes, Jackson looked at that when he told me the time," replied Smithson.

"Very good." Desmond drew it out of Lovely's pocket and opened the case to glance at the dial. His heart gave a sudden jump; only with difficulty did he restrain a feeling of triumph. But his face was as unmoved as before as he went on with his inquiries.

"There is a dark corner here," he said entering the passage. "Anybody hiding in it would be unseen by a man ascending the stairs. You could have waited here, Mr. Smithson."

"What the—of course, but I went straight downstairs after leaving Jackson. It must be plain that I could not be the one Vernon alleges—alleges, bear in mind—struck him."

"Quite plain, eh? Yet such a thing is as probable as the supposition that a dying man struck him with such force as to render him unconscious for nearly an hour. But I have seen all that I require. Shall we go below again?"

Phillips agreed and the five men went downstairs, Vernon having by this time quite recovered. They seated themselves around the table again, and after a moment or two, the question was put to Desmond whether he had formed his conclusions.

"Yes, to my own satisfaction, if not to yours," was the reply. "In the first place, Vernon is quite innocent. His story I believe to be true. Perhaps in a law court my evidence would be insufficient to convict, but I unhesitatingly declare Mr. Smithson to be the murderer."

"For a moment there was a strained silence in the room, to be broken by a loud oath from Smithson, whose face had suddenly become livid. "Your proofs," he shouted, hoarsely.

"Yes, your proofs," echoed the others, eagerly.

"First, this shred of cloth that I found in that dark corner of the passage upstairs belongs, if I mistake not, to the coat Mr. Smithson has on. That proves that he stood there against the wall, does it not? Secondly, let me ask a question. Has any one of you been in Jackson's company of late between the hours of 8:30 and 9 o'clock? But, of course, as he only exists in the imagination, the question is—"

"No, no, I have been in his company about that time," put in Phillips,

**A Few Words**

about

**Pain-Killer**

A prominent Montreal clergyman, the Rev. James H. Dixon, Rector St. Jude's and Hon. Canon of Christ Church Cathedral, writes:—"Permit me to send you a few lines to strongly recommend PERRY DAVIS' PAIN-KILLER. I have used it with satisfaction for thirty-five years. It is a preparation which deserves full public confidence."

**Pain-Killer** A sure cure for Sore Throat, Coughs, Chills, Cramps, &c.

Two Sizes, 25c. and 50c.

There is only one Pain-Killer, Perry Davis.



quickly. "You see, the real Jackson is Lovely," he added, in explanation.

"Have you seen him, then, do anything with his watch?"

"I have seen him take it out and open the front, but what he did I cannot say."

"Your watch, please, Mr. Lovely. Thank you. Now observe the hands. Do you see anything peculiar? But, of course, you know about it, don't you?"

"No. Why, the hands have caught in one another. The watch has stopped at about seventeen minutes to nine. And Smithson declared that Jackson told him the time from the watch later than that. The statement was untrue. You, Smithson, must have been in the room when Vernon entered the house. You heard him ascending the stairs, and took Jackson's stick and hid in the passage with the rest, as Vernon has stated. \* \* \* You are correct Mr. Desmond. Allow me to congratulate you."

Smithson sprang up with a cry of rage.

"Curse you," he shouted. "Curse you." And before the unfortunate detective could do anything to defend himself, the man lifted the chair high in the air and brought it down with a dull thud upon his skull, knocking him senseless to the floor.

\* \* \* \* \*

Desmond knew no more until he found himself in bed in his own home, with a nurse sitting beside him.

"How long have I been here?" he asked, weakly.

"You were brought in a cab early this morning. I and the doctor were sent on by a stranger. Do you feel better now?"

"I'm getting stronger every minute. What was the stranger like? Can you describe him?"

"Neither the doctor nor I saw him, but there is a letter he left for you, with instructions that you had to read it as soon as you were better. Will you sit up?"

When the nurse had arranged the pillows he tore the envelope open. His head was aching badly, but in his anxiety to hear the truth about his adventure he forgot that. The first thing he pulled out was a £100 banknote; then followed the following letter:

"MY DEAR FRIEND:—I call you this because you have saved my life. As you no doubt will guess, last night's affair had more reason for it than a mere bet; it was a matter of life and death. We are a peculiar society of American origin; more I cannot say for obvious reasons. The story we told and acted for you had actually occurred, only the real Jackson was not killed outright. He was lying unconscious in the house the whole of the time. It was absolutely necessary that we should know who had attacked him, so your aid was invoked. You proved that I, who was accused, with great reason, I admit, am innocent, and found Smithson guilty, for after his assault upon you he confessed all. According to our rules he

will not live long. I must warn you not to attempt to trace us. By the time you read this we shall have vanished. Again do I thank you. Believe me to be, always your debtor,

"JAMESTONE VERNON."

And this was all. Through Desmond has since devoted days to the search of the street and the brick house, or to some of the men whom he saw there, he has not succeeded. They have disappeared as utterly as if the earth had swallowed them up. Did the real Jackson recover from his wound? Did Smithson meet with the penalty hinted at in the letter? These are questions he may never have answered. But he will never forget that night's strange adventure, when he solved a mystery by the two hands of a watch catching in each other.—Tit-Bits.

#### Housekeeping Wisdom.

The following advice, given to a young married woman who was visited by another, older and more experienced, one, may be helpful to some of our readers:

When the visitor arose to go the hostess came with her to the door and out upon the pleasant piazza, which, however, looked a little dusty in the corner.

"Oh, dear!" said the young wife, "how provoking the servants are! I told Mary to sweep the piazza thoroughly, and now look how dusty it is."

"Grace," said the older woman, looking into the disturbed young face with kindly, humorous eyes, "I am an old housekeeper. Let me give you a bit of advice: Never direct people's attention to defects. Unless you do they will rarely see them."

"Now, if I had been in your place, and noticed the dirt, I should have said, 'How blue the sky is!' or, 'How beautiful the clouds are!' or, 'How bracing the air is!' Then I should have looked up at that as I spoke, and should have got you safely down the steps and out of sight without your seeing the dust."

#### When to Clean the Teeth.

If the teeth are to get but one thorough cleansing during the day, just before retiring is the best time to give it to them, as there are six or eight hours during sleep that the salivary glands are inactive, and fatty and starchy foods that may be lodged between and around the teeth are bathed in saliva, a partial digestive fluid, undergo decomposition, forming acids, which act more or less readily on the tooth structure at the time of formation; the salivary glands, not being active during sleep, acids are not diluted, as during day a free flow of saliva prevents, to a great degree, the deleterious effects of acids thus formed.

The teeth and gums should be carefully brushed after each meal with a medium soft brush, using as a wash, on damp brush, alcohol, rosewater and listerine, equal parts.—Practical Drug-gist.

#### Serving.

The sweetest lives are those to duty wed,  
Whose deeds, both great and small,  
Are close-knit strands of unbroken thread,  
Where love ennobles all.  
The world may sound no trumpets, ring no bells—  
The book of life the shining record tells.

Thy love shall chant its own beatitudes  
After its own life working. A child's kiss  
Set on thy sighing lips shall make thee glad.

A sick man helped by thee shall make thee strong.  
Thou shalt be served thyself by every sense  
Of service which thou renderest.

—Elizabeth Barrett Browning.

"How was Admiral Dewey's naval rank reduced when he got married?"  
"He became Mrs. Dewey's second mate."—Our Dumb Animals.

Lady—Yes, hope and charity is right.  
But what is the first thing we all need to make us happy?  
Small Girl—'Usbands, Miss.

## DOMESTIC ECONOMY.

#### Domestic Hints.

**FRUIT COOKIES.**—Three eggs, one and one-half cupfuls of sugar, one cupful of butter, one and one-half cupfuls of seeded and chopped raisins, two cupfuls of flour, one-half teaspoonful of soda dissolved in two tablespoonfuls of milk or water, one teaspoonful of cinnamon, one-half teaspoonful of cloves. Drop from a spoon into buttered tins and bake.

**PRESERVED CITRON MELON.**—Peel citron melon and cut it into pieces about two inches square. Put into water containing an ounce of alum to a gallon of water, and boil until tender. Drain off the water and throw it away. For each pound of melon allow a pound of sugar and cupful of pure water, and of this make a syrup. Boil until clear, skimming frequently. To each pound of fruit put a sliced lemon and a little green ginger root, also sliced, adding this to the syrup after you have put in the fruit. This should cook fifteen minutes in all, ten minutes after the addition of the ginger and lemon.

**INDIVIDUAL OYSTER SOUFFLES.**—Chop ten large oysters. Make a white sauce of two tablespoonfuls of flour, three tablespoonfuls of butter. One and a half cupfuls of milk, and salt and pepper to taste. Add the oysters and their juice to the sauce. Let them cook three minutes. Draw the saucepan to the back of the stove, and stir in the well-beaten yolks of three eggs. Cook for one minute, and set away until cool. Beat the whites of the three eggs stiff and fold them into a cool mixture. Thoroughly oil paper cases (these can be obtained from any caterer), and fill the mixture into them. Cover each with buttered bread crumbs, stand on a baking pan and bake in a moderate oven for about fifteen minutes.

#### Hints to Housekeepers.

To cleanse a sponge, let it lie all night immersed in sweet milk and then rinse it thoroughly in cold water.

Bags of sweet clover blossoms and leaves give a delicate fragrance to linen, and can be used without replenishing for two years or even more.

For a hasty bit of nourishment nothing that can be prepared so quickly will go further than a raw egg beaten in a wineglass of unfermented grape juice.

Austrian finished oak is the new finish for wood in furniture. It is somewhat like Flemish oak, with a brown tone, however, instead of black. It is a handsome and effective finish for little, occasional tables, sewing chairs, and particularly for hall furnishings, or for smoking rooms or den outfits.

A sandwich, which is an agreeable reminiscence to many of the bread and butter and sugar of childhood, has for a filling hard sauce such as is used for puddings. A bit left over from the dessert of the day before may be utilized,

or butter and sugar and a little sherry may be put together especially for the purpose. White sandwich bread cut thin and crustless should be used.

#### How to Eat Passion Fruit.

TO THE EDITOR:—At the risk of telling you something that very likely you already know, I am going to state that the proper way to eat the *Passiflora edulis* is with sugar and cream. The cream seems to furnish an oil, or something which neutralizes that sickish tendency of the fruit. This is an idea furnished by a lady from Australia, and, acting on it, I find the fruit quite saleable in Los Angeles, when previously no one would care for it.

Orange, Cal.

C. P. TAFT.

"HONESTY is the best policy." Nobody contradicts it.

Your dealer can get lamp-chimneys that almost never break from heat, or those that break continually. Which does he get? Which do you get?

Macbeth's "pearl top" and "pearl glass" are tough against heat; not one in a hundred breaks in use. The glass is clear as well as tough. They are accurate, uniform.

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THE NEWEST THING IN HORTICULTURAL ART.

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THE IMPROVED U. S. SEPARATOR.

Could Not Do Without It.

VERMONT, ILL., April 20, 1900.  
We bought a No. 5 U. S. Separator over a year ago, and we could not do without it. It has paid us more than 5 times the original cost. The repairs have been very little, only rubbers. Think it the best machine a farmer can have on a farm.

JOHN GIBBLE.

Write for catalogues containing many more similar to the above telling of the many advantages of having a U. S. Separator.

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possess accuracy and endurance under all conditions and in all degrees of temperature.  
**Full Ruby Jeweled.**  
Sold by jewelers everywhere.  
An Elgin Watch always has the word "Elgin" engraved on the works—fully guaranteed.  
Send for free booklet.  
ELGIN NATIONAL WATCH CO. ELGIN, ILL.



## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Nov. 7, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

|                | Nov.    | Dec.    |
|----------------|---------|---------|
| Wednesday..... | 73 @74  | 74 @74½ |
| Thursday.....  | 74½@73½ | 75½@74½ |
| Friday.....    | 73½@72½ | 74½@73½ |
| Saturday.....  | 72½@72½ | 73½@73½ |
| Monday.....    | 72½@73½ | 73½@74½ |
| Tuesday.....   | *—@—    | —@—     |

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

|                | Dec.    | Feb.   |
|----------------|---------|--------|
| Wednesday..... | 6s 0¼d  | 6s 2 d |
| Thursday.....  | 6s 0¼d  | 6s 1¼d |
| Friday.....    | 6s 0¼d  | 6s 1¼d |
| Saturday.....  | 5s 11¼d | 6s 1 d |
| Monday.....    | 6s 0¼d  | 6s 1¼d |
| Tuesday.....   | -s —d   | -s —d  |

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

|                | Dec., 1900. | May, 1901.  |
|----------------|-------------|-------------|
| Thursday.....  | 99 @ 98½    | 1 06½@1 05¼ |
| Friday.....    | —@—         | 1 05½@1 05¼ |
| Saturday.....  | —@—         | 1 05½@1 06½ |
| Monday.....    | 1 00 @1 00¼ | 1 06½@1 07¼ |
| Tuesday.....   | *—@—        | —@—         |
| Wednesday..... | 1 00@ 99½   | 1 07½@1 06½ |

\*Election day.

## WHEAT.

The better tone noted as having been developed in the Wheat market at close of last review continued into the current week, but it was not sufficiently pronounced to very greatly affect conditions or values for spot Wheat, confining itself largely to moderate gains in speculative values or prices for options. The basis of the improved tone was a reported shortage in the Argentine crop. The surplus of this winter's yield in the Argentine, it is claimed, will not exceed 48,000,000 bushels, while the last crop afforded 75,000,000 bushels for export. The shortage as above indicated is 27,000,000 bushels. This is equivalent to 810,000 short tons, or a greater amount than the entire surplus of California's Wheat crop in any single season for the past ten years. In fact, only three times in the past twenty years has the exportable surplus of Wheat in this State exceeded 800,000 tons. Should the shortage in the Argentine prove as heavy as claimed, the market will in all probability show more substantial improvement than thus far, both actual and speculative values. But the Argentine crop has yet to be harvested, and the outcome may be different from the statement now set forth. Last reported Wheat shipments from Argentine showed an increase as compared with preceding week. Market here closed quiet, but fairly steady at the quotable advance recorded for shipping wheat.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, 98½c@\$.1.00½.  
May, 1901, delivery, \$1.05½@1.07½.

Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at \$1.00½@99½c.; May, 1901, \$1.07½@1.06½.

California Milling.....\$1 00 @1 05  
Cal. No. 1 shipping, alongside..... 95 @ 97½  
Oregon Valley..... 95 @ 97½  
Washington Blue Stem..... 1 00 @1 02½  
Washington Club..... 97½@1 02½  
Off qualities wheat..... 90 @ 92½

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

1899-1900. 1900-01.  
Liv. quotations..... 6s2¼d@-s-d 6s3¼d@6s4¼d  
Freight rates..... 33¼@36¼s 42¼@43¼s  
Local market..... \$1 05@1 07½ \$0 95@98½

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## LOCAL STOCKS OF GRAIN.

Stocks of grain in Call Board warehouses on Oct. 1st and Nov. 1st:

Tons— Oct. 1st. Nov. 1st.  
Wheat..... 221,442 \*203,779  
Barley..... 90,188 781,284  
Oats..... 5,700 5,457  
Corn..... 8 112

\*Including 129,776 tons at Port Costa, 72,900 tons at Stockton.  
†Including 50,096 tons at Port Costa, 19,127 tons at Stockton.

Stocks of wheat in Call Board warehouses on 1st inst. show a decrease of 17,663 tons for the month of October. A year ago there were 251,975 tons wheat in Call Board warehouses.

## FLOUR.

Quotable rates are unchanged and the market is not firm at these figures. Al-

though stocks have been much heavier at many times in the past than at present, they are proving more than ample for immediate needs. The export movement the past week has been quite large, two steamers bound for the Orient taking over 40,000 barrels. Most of this flour went forward on contracts.

Superfine, lower grades.....\$2 25@2 50  
Superfine, good to choice..... 2 60@2 80  
Country grades, extras..... 3 15@3 40  
Choice and extra choice..... 3 40@3 65  
Fancy brands, jobbing..... 3 60@3 75  
Oregon, Bakers' extra..... 2 90@3 25  
Washington, Bakers' extra..... 2 90@3 40

## BARLEY.

There has been a quiet market for this cereal the current week, and few changes of moment to record in quotable rates. Business transacted was largely in feed barley, the better sorts of which were in the main more firmly held. In brewing and shipping grades the movement is exceedingly light and not much of this description offering. Trading on Call Board was of insignificant proportions, but bids and asking figures on futures averaged a little higher than previous week.

Feed, No. 1 to choice..... 75 @ 77½  
Feed, fair to good..... 70 @ 72½  
Brewing, No. 1 to choice..... 80 @ 85  
Chevalier, No. 1 to choice..... 97½@1 02½  
Chevalier, No. 2..... 85 @ 90  
Chevalier, poor..... 70 @ 75

## OATS.

Business has not been brisk the current week, but such transfers as were effected were as a rule at full current figures, showing values to be virtually in the same position as lately quoted, the market presenting as a whole a healthy tone. The proportion of white oats in spot stocks and offerings continues light. Reds make a more liberal display than any other variety.

White Oats, fancy feed..... 1 37½@1 42½  
White, good to choice..... 1 30 @1 35  
White, poor to fair..... 1 20 @1 27½  
Gray, common to choice..... 1 30 @1 32½  
Milling..... 1 35 @1 42½  
Surprise, good to choice..... 1 40 @1 45  
Black Russian..... 1 12½@1 25  
Red..... 1 15 @1 32½

## CORN.

Spot supplies are showing some increase, both of Eastern and domestic product, but are still of light volume. Values for Eastern remain without appreciable change. California Small Yellow has been tending slightly in buyers' favor.

Large White, good to choice..... 1 22½@1 25  
Large Yellow..... 1 20 @1 22½  
Small Yellow..... 1 40 @—  
Eastern, in bulk (carload lots)..... 1 14 @1 17

## RYE.

Market is fairly steady as to values. There are no great quantities offering, neither is there much inquiry.

Good to choice, new..... 87½@ 90

## BUCKWHEAT.

Several small lots have lately come forward, meeting with custom within range of figures below quoted.

Good to choice..... 1 75 @2 00

## BEANS.

The tone of the market is about as firm as last noted. The most active inquiry, as for several weeks past, is for white beans, and firmness is perhaps a little more pronounced on these than on colored kinds. Choice Bayos do not, however, incline in favor of buyers. Most of the Pink beans offering show defective quality and on this account do not meet with much favor.

Pea, fair to good, 100 lbs..... 3 75 @4 00  
Small White, good to choice..... 3 90 @4 10  
Lady Washington..... 2 85 @3 10  
Butter..... 4 03 @4 50  
Pinks..... 1 90 @2 10  
Bayos, good to choice..... 2 65 @2 90  
Reds..... 2 50 @3 00  
Limas, good to choice..... 5 15 @5 30  
Black-eye Beans..... 3 00 @3 25  
Horse Beans..... 1 75 @2 00  
Garbanzos, large..... 2 00 @2 25  
Garbanzos, small..... 1 25 @1 75

Advices by recent mail from New York give the following review of the bean market, prices quoted being per 60-pound bushel:

The increase in supplies of domestic white beans has been so gradual that up to the present writing everything has been taken on arrival and the market has ruled strong in consequence. Marrow have been wanted by both exporters and home jobbers, and it was easy to realize \$2.50 for choice stock; in a few exceptional cases that figure was exceeded a little, but the suggestion of an advance has been strongly opposed by the trade. The unusual scarcity of Medium has forced prices a little higher, part of the week's business being at \$2.22½. Pea have sold well, and while buyers have not been quite so eager to secure stock to arrive, all the lots that have come in have cleared promptly at \$2.10 generally; at times there was real shortage of spot goods and a few

jobbing sales reported at \$2.12½. A car of fairly good Michigan bags sold at \$2.05. There has been constant expectation that values must ease off soon, but dealers throughout the country were so nearly out of beans that it is taking some time to stock them up. In the apparent effort to get stock forward to deliver on contracts shippers have not been careful enough to have the beans properly picked; this may give us trouble later and it should be attended to at once. Exporters have taken some new Red Kidney at \$2.55@2.60, but the buying is cautious and the feeling a little unsettled at the close; nice old stock held steady. White Kidney very scarce and inquired for. Yellow Eye 5c. higher and firm; some have gone for export. Turtle Soup quiet. Lima steady and in fair demand at \$3.55@3.60. Scotch and green peas moving fairly.

## DRIED PEAS.

Market is strong, especially for choice Green, with practically none of this sort on market, outside of limited holdings of Eastern in the hands of millers. Stocks of Niles Peas are of small proportions.

Green Peas, California..... 2 50 @2 75  
Niles Peas..... 1 90 @2 00

## WOOL.

With election on the current week, it could not well be otherwise than quiet in wool circles. There was fair inquiry, however, for good to choice wools, mainly for Falls, and where bids were made they were fully up to best figures lately current. An improved demand at an early day is now confidently looked for, and it would not be surprising to see a moderate hardening in values, especially for most desirable stocks.

## SPRING.

Humboldt and Mendocino..... 16 @17  
Northern, free..... 14 @15  
Northern, defective..... 12 @13  
Middle Counties, free..... 14 @15  
Middle Counties, defective..... 11 @13  
Southern, 12 mos..... 8 @10  
Southern, free, 7 mos..... 9 @11  
Southern, defective, 7 mos..... 8 @9  
Oregon Valley, fine..... 17 @18  
Oregon Valley, coarse to medium..... 16 @17  
Eastern Oregon, choice..... 13 @16  
Eastern Oregon, fair to good..... 10 @12  
Nevada, as to condition..... 11 @15

## FALL.

Humboldt and Mendocino..... 11 @13  
Middle County..... 9 @10  
San Joaquin..... 7 @9  
San Joaquin Lambs..... 8 @9

## HOPS.

Conditions in local market remain much the same as noted in last review. Values show steadiness, with neither buyers nor sellers displaying any special anxiety. To effect prompt transfers in a wholesale way 13@14c. would likely have to be accepted for good to choice. Higher figures are being asked, but are only being realized in a small way, mainly on stocks being jobbed out from second hands.

Good to choice 1900 crop..... 13 @15

The following report of the hop market is from a New York authority, published under recent date and coming through by mail:

There is a steady but very gradual expansion of the trade in the local market. Exporters fill most of their orders in the interior, and brewers are not taking hold as freely as might be expected in view of the advance and heavy buying in the interior. The higher cost of the goods arriving, coupled with the firm attitude of growers, has strengthened the views of the selling interest, and choice State and Pacific coast hops are quoted at 18@19c.; the lower grades when sold go at 16@17½c. generally. There is also a little stronger feeling in the best of the '99 hops, a few Pacifics selling at 14½@15c. Older growths work out slowly. Increased buying has been reported in the interior of this State all the week, and at better prices; the extreme range of values has been 14@18c., with the bulk of the business at 15½@17c. On the Pacific coast buying has been heavy at 14@16c., latter for very choice hops. London advices indicate only a moderate demand, but a gradually hardening market. According to the Brewers' Journal, the estimates of the English crop vary from 307,000 cwt. to 333,502 cwt.

## HAY AND STRAW.

Arrivals of hay are now quite moderate and give promise of so continuing for sometime to come. There is a fair inquiry, about sufficient to absorb at the current figures the supplies at present coming forward. It is believed that stocks now remaining will be mostly if not wholly consumed before the opening of another season.

Wheat..... 9 00@13 00  
Wheat and Oat..... 9 00@12 00  
Oat..... 8 00@12 00  
Barley..... 7 00@9 00  
Volunteer..... 6 00@7 50  
Alfalfa..... 8 00@9 50  
Stock..... 5 50@7 00  
Compressed..... 9 00@13 00  
Straw, ½ bale..... 35 @ 45

## MILLSTUFFS.

Stocks of Bran were liberal, as compared with immediate demand, and market showed weakness. Middlings and Shorts ruled quiet, with no appreciable changes in quotable rates. Rolled Barley was firmer, and Milled Corn was held as last quoted; trade in both was light.

Bran, ½ ton..... 14 50@15 50  
Middlings..... 15 50@19 00  
Shorts, Oregon..... 15 00@16 50  
Barley, Rolled..... 16 00@16 50  
Cornmeal..... 28 00@—  
Cracked Corn..... 27 00@—

## SEEDS.

A carload of Alfalfa Seed arrived here the past week, most of which is being dealt out on previous orders. There is virtually no Mustard Seed offering. Flaxseed is arriving in moderate quantity and is being mostly delivered on contract. Business in Bird Seed is light and at generally unchanged values.

Mustard, Trieste..... —@—  
Mustard, Yellow..... —@—  
Flax..... 2 00@2 50  
Canary..... 3¼@ 4  
Rape..... 2 @ 3  
Hemp..... 3¼@ 4

## BAGS AND BAGGING.

Grain Bag market is quiet at quotably unchanged rates, there being no business to record in either spot stock or futures. Trading in other bags and bagging is at same figures as current for some time past, but is of such insignificant proportions as to leave the entire market almost lifeless.

Calcutta Grain Bags, huyer June-July..... 6¼@ 6½  
Calcutta Grain Bags, spot..... 6 @—  
San Francisco Grain Bags, 22x36, spot..... 5½@ 6  
State Prison Bags in lots of 2000, ½ 100..... —@—  
Wool Sacks, 4 lbs..... —@28¼  
Wool Sacks, 8½ lbs..... —@32½  
Fleece Twine..... 7¼@—  
Gunnies..... —@12¼  
Bean Bags..... 4¼@ 5¼  
Fruit Sacks, cotton..... 6¼@ 7¼

## HIDES, PELTS AND TALLOW.

Market throughout has been quiet during the week under review. There were no appreciable changes in quotable rates, but Hides and Pelts inclined to firmness. Tallow was steady.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, other from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

|                                     | Sound.      | Culls. |
|-------------------------------------|-------------|--------|
| Heavy Steers, over 56 lbs.....      | 10          | 9      |
| Medium Steers, 48 to 56 lbs.....    | 9           | 8      |
| Light Steers, under 48 lbs.....     | 8¼          | 7¼     |
| Heavy Cow Hides, over 50 lbs.....   | 8¼          | 7¼     |
| Light Cow Hides, under 50 lbs.....  | 8¼          | 7¼     |
| Wet Salted Kip.....                 | 9           | 8      |
| Wet Salted Veal.....                | 9           | 8      |
| Wet Salted Calf.....                | 10          | 9      |
| Dry Hides.....                      | 16          | 13     |
| Dry Kip and Veal, 11 to 16 lbs..... | 15@16@13@14 | 16     |
| Dry Calf, under 4 lbs.....          | 16          | 13     |
| Salted Horse Hides, large.....      | 2 50 @—     | —      |
| Salted Horse Hides, medium.....     | 2 00 @—     | —      |
| Salted Horse Hides, small.....      | 1 00 @—     | —      |
| Dry Horse Hides, large.....         | 1 75 @—     | —      |
| Dry Horse Hides, small.....         | 1 00 @1 50  | —      |
| Dry Colts' Hides.....               | 50 @—       | —      |
| Pelts, long wool, ½ skin.....       | 80 @1 00    | —      |
| Pelts, medium, ½ skin.....          | 60 @ 85     | —      |
| Pelts, short wool, ½ skin.....      | 30 @ 50     | —      |
| Pelts, shearing, ½ skin.....        | 15 @ 25     | —      |
| Deer Skins, best summer.....        | 27½@ 30     | —      |
| Deer Skins, good medium.....        | 20 @ 22½    | —      |
| Deer Skins, thin winter.....        | — @ 10      | —      |
| Elk Hides.....                      | 10 @ 12     | —      |
| Tallow, good quality.....           | 4 @—        | —      |
| Tallow, No. 2.....                  | 3 @ 3¼      | —      |
| Goat Skins, perfect.....            | 30 @ 37½    | —      |
| Goat Skins, damaged.....            | 10 @ 20     | —      |
| Kid Skins.....                      | 5 @ 10      | —      |

## HONEY.

Owing to slim stocks, business in honey of all descriptions is of necessity restricted to very small compass. High-grade Water White, either Comb or Extracted, is especially scarce. Previous quotations remain in force, with market firm at these figures.

Extracted, White Liquid..... 7¼@ 8  
Extracted, Light Amber..... 6¼@ 7¼  
Extracted, Amber..... 5¼@ 6  
White Comb, 1 lb frames..... 13 @14  
Amber Comb..... 11¼@12¼  
Dark Comb..... 8 @ 9

## BEESWAX.

There is no lack of demand and much more than is offering could be readily placed at prevailing rates.

Good to choice, light, ½ lb..... 26 @28  
Dark..... 24 @25

## LIVE STOCK AND MEATS.

Market for Beef shows healthy condition, demand being good and the advanced quotations are being well sustained. Mutton is meeting with very fair custom, market being moderately firm, but not quotably higher. Lamb and Veal in prime condition were salable to very fair advantage. Hog market showed steadiness, demand and supplies about balancing.

Beef, first quality, dressed, net ½ lb..... 6¼@ 6½  
Beef, second quality..... 5¼@ 6



|                                   |        |
|-----------------------------------|--------|
| Beef, third quality.....          | 5 @—   |
| Mutton—ewes, 6½@7c; wethers.....  | 7 @ 7½ |
| Hogs, hard grain fed, medium..... | 5½@ 5½ |
| Hogs, small, fat.....             | 5½@ 5½ |
| Hogs, large, hard.....            | 5½@—   |
| Hogs, feeders.....                | 5 @ 5½ |
| Hogs, country dressed.....        | 6½@ 7  |
| Veal, small, ½ lb.....            | 6 @ 9  |
| Veal, large, ½ lb.....            | 7½@ 8½ |
| Lamb, spring, ½ lb.....           | 8 @ 8½ |

## POULTRY.

In the market for Chickens, there was a little better demand for young stock than during preceding week, but at no appreciable improvement in prices. Old Chickens had to be large and fat to meet with much attention, and then did not bring fancy figures. Eastern Hens sold down to \$3.50 per dozen. Ducks and Geese sold at much the same figures as preceding week, but demand was not brisk. Turkeys, both Live and Dressed, were in slightly improved request.

|                                   |             |
|-----------------------------------|-------------|
| Turkeys, live hens, ½ lb.....     | 13 @ 15     |
| Turkeys, live gobblers, ½ lb..... | 13 @ 15     |
| Turkeys, Dressed, per lb.....     | 14 @ 16     |
| Hens, California, ½ dozen.....    | 3 50 @ 4 50 |
| Roosters, old.....                | 3 50 @ 4 00 |
| Roosters, young (full-grown)..... | 3 50 @ 4 50 |
| Fryers.....                       | 3 00 @ 3 50 |
| Broilers, large.....              | 3 00 @ 3 50 |
| Broilers, small.....              | 2 50 @ 3 00 |
| Ducks, old, ½ dozen.....          | 3 00 @ 4 00 |
| Ducks, young, ½ dozen.....        | 3 50 @ 4 50 |
| Geese, ½ pair.....                | 1 50 @ 1 75 |
| Goslings, ½ pair.....             | 1 75 @ 2 00 |
| Pigeons, old, ½ dozen.....        | 1 00 @—     |
| Pigeons, young.....               | 1 50 @ 1 75 |

## BUTTER.

The fresh butter market has continued unfavorable to the selling interest, especially for other than most select. A large proportion of the butter now being turned out is more or less defective, even of brands which ordinarily rank high, owing mainly to a large number of cows coming in fresh, and also due to feed in most sections not being first-class. Improved conditions, however, will likely be soon experienced. There are still fairly liberal quantities of held and packed butter on the market.

|                                           |         |
|-------------------------------------------|---------|
| Creamery, extras, ½ lb.....               | 22 @ 23 |
| Creamery, firsts.....                     | 21 @ 22 |
| Creamery, seconds.....                    | 20 @ 21 |
| Dairy, select.....                        | 20 @ 21 |
| Dairy, seconds.....                       | 18 @ 19 |
| Dairy, soft and weedy.....                | — @—    |
| Mixed store.....                          | 16 @ 17 |
| Creamery in tubs.....                     | 20 @ 22 |
| Pickled Roll.....                         | 20 @ 21 |
| Pirkin, California, choice to select..... | 30 @ 21 |
| Pirkin, common to fair.....               | 17 @ 18 |

## CHEESE.

New cheese of high grade is in good request and market for same is firm, some favorite makes selling above quotable rates. Held cheese is in moderate stock, is mostly in second hands and is commanding steady figures.

|                                   |          |
|-----------------------------------|----------|
| California, fancy flat, new.....  | 11 @ 12  |
| California, good to choice.....   | 10 @ 11  |
| California, fair to good.....     | 9½@ 10   |
| California Cheddar.....           | — @—     |
| California, "Young Americas"..... | 10 @ 12½ |

## EGGS.

The unsettled condition noted last week as existing in the egg market has since been still more pronounced. Arrivals of fresh have been on the increase and they have been going at an irregular and wide range of prices. Strictly fresh eggs, but averaging small, and brown and white mixed, sold down to 32½c, while some fancy, uniformly large and white, sold above our top quotation. Eastern and local cold storage eggs continued to be offered freely.

|                                                 |         |
|-------------------------------------------------|---------|
| California, select, large, white and fresh..... | 37½@—   |
| California, select, irregular color & size..... | 30 @ 35 |
| California, good to choice store.....           | 25 @ 25 |
| Eastern, as to section and grading.....         | 20 @ 29 |
| Eastern, cold storage.....                      | — @—    |

## VEGETABLES.

There has been further improvement in the market for Onions, with good demand, both for shipment and on local speculative account. Arrivals and offerings have been of quite moderate volume. The display of other vegetables quoted herewith was not extensive, and such changes as were effected in quotable rates were in the main to a higher range of prices. Peas and String Beans were in very light receipt. Tomatoes and Cucumbers were mostly too poor to be sought after.

|                                        |             |
|----------------------------------------|-------------|
| Beans, String, ½ lb.....               | 4 @ 6       |
| Beans, Wax, ½ lb.....                  | — @—        |
| Beans, Lima, ½ lb.....                 | 3 @ 4       |
| Cabbage, choice garden, ½ 100 lbs..... | 1 00 @ 1 25 |
| Cauliflower, ½ dozen.....              | 50 @—       |
| Cucumbers, Bay, ½ box.....             | 30 @ 60     |
| Egg Plant, ½ box.....                  | 30 @ 60     |
| Garlic, ½ lb.....                      | 4½@ 6       |
| Onions, Yellow Danver, ½ cental.....   | 1 00 @ 1 25 |
| Okra, Green, ½ box.....                | 30 @ 60     |
| Peas, Sweet, garden, ½ lb.....         | 4 @ 5       |
| Peppers, Green Chile, ½ box.....       | 30 @ 50     |
| Peppers, Bell, ½ lb.....               | 35 @ 60     |
| Squash, Summer, ½ large box.....       | 75 @ 1 00   |
| Tomatoes, River, ½ large box.....      | 30 @ 60     |

## POTATOES.

The market has ruled quiet most of the time since last review and has tended

against sellers. Especially for other than most select was the market slow and weak. Arrivals and offerings were fairly liberal, including moderate quantities from Oregon and Washington. Sweet potatoes were offered in much larger quantity than was warranted by the immediate demand.

|                                       |             |
|---------------------------------------|-------------|
| Burbanks, River, ½ cental.....        | 30 @ 60     |
| Burbanks, Petaluma-Tomales.....       | 35 @ 60     |
| Burbanks, Salinas, ½ cental.....      | 1 00 @ 1 25 |
| Burbanks, Oregon, ½ cental.....       | 55 @ 90     |
| Sweet Potatoes, Yellow, ½ cental..... | 50 @ 1 00   |

## The Fruit Market.

## FRESH FRUITS.

In the line of fresh fruits, other than citrus, Apples and Pears now take the lead, and in fact have little competition to contend with. Apples are in quite liberal supply, but the proportion of offerings of choice to select quality is small. While fancy Spitzenberg or equally desirable are commanding comparatively good figures, sales being made up to \$1.25 for select, four tier to the box, for poor qualities the market is dull and weak at a low range, say 25@40c per box. Some very good Apples are offering at 75c. Pears are selling at much the same wide range as Apples, but sales at extreme figures are the exception and are confined to most select Winter Nells in full 50-pound box. Persimmons were not in heavy receipt but there were enough for the limited demand. Pomegranates moved slowly at quotably unchanged rates. Grapes were in light receipt and prices for choice tended in favor of sellers. Berries of all kinds were in slim supply, and the quality did not average high; prices showed little or no change, but market could not be termed firm.

|                                          |             |
|------------------------------------------|-------------|
| Apples, fancy, 4-tier box.....           | 1 00 @ 1 25 |
| Apples, good to choice, ½ 50-lb box..... | 80 @ 90     |
| Apples, common to fair, ½ 50-lb box..... | 25 @ 50     |
| Grapes, Tokay, ½ box.....                | 40 @ 75     |
| Grapes, Black, ½ box.....                | 40 @ 75     |
| Grapes, Muscat, ½ box.....               | 40 @ 75     |
| Raspberries, ½ chest.....                | 5 00 @ 7 00 |
| Pears, Winter Nells, ½ box.....          | 50 @ 1 00   |
| Pears, common kinds, ½ box.....          | 30 @ 75     |
| Persimmons, ½ box.....                   | 40 @ 75     |
| Pomegranates, ½ box.....                 | 75 @ 1 00   |
| Quinces, ½ box.....                      | 40 @ 75     |
| Strawberries, Large, ½ chest.....        | 5 00 @ 6 50 |
| Whortleberries, ½ lb.....                | 5 @ 7       |

## DRIED FRUITS.

One of the most quiet weeks of the season has been experienced in the market for cured and evaporated fruits. Little else was expected, and it would have been surprising to have had it materially otherwise. There was virtually nothing doing in the way of sales from first hands, and transfers by packers were not numerous, nor heavy in the aggregate. Quotable rates are without particular change, but they represent in the main little more than asking prices at present. Attempts to crowd stocks to sale under existing conditions would be folly, as it would only result in battering down prices and making buyers still more timid. The time not to sell is when there is no demand, and the time to sell any article is when it is in request and is meeting with competition between buyers. The reverse is equally true in regard to buying, or in other words, the best time to buy an article is when the seller is anxious and nobody wants it. But this is difficult to put into practice. Business men of long experience will do most of their buying on a firm and rising market, while many producers of long experience will make the greatest efforts to unload when the market is most unfavorable for them. In the way of tree fruit, Apricots stand alone at the moment as showing any firmness, with no stocks of the same worth mentioning in either first or wholesale hands. Now that the national election has been held, and politics are to be shelved for a time, it is likely that the near future will witness the development of at least a moderate movement in the dried fruit trade.

## EVAPORATED OR BLEACHED.

|                                                          |         |
|----------------------------------------------------------|---------|
| Apricots, Royal, prime.....                              | 6½@ 7   |
| Apricots, Royal, choice, in sacks, ½ lb.....             | 7½@ 8   |
| Apricots, Royal, fancy.....                              | 9 @—    |
| Apricots, Moorpark.....                                  | 9½@ 11½ |
| Apples, in 50-lb boxes, rings, pressed, fancy.....       | 5½@ 5½  |
| Apples, 50-lb boxes, rings, pressed, good to choice..... | 4 @ 4½  |
| Figs, White, fancy pressed.....                          | 6 @ 7   |
| Nectarines, ½ lb.....                                    | 4 @ 6   |
| Peaches, unpeeled, fancy.....                            | 6 @ 6½  |
| Peaches, unpeeled, choice.....                           | 5 @ 5½  |
| Peaches, peeled, in boxes.....                           | 11 @ 14 |
| Pears, unpeeled Bartlett's, halved, fancy.....           | 6 @ 6½  |
| Pears, halved, unpeeled Bartlett's.....                  | 4 @ 5½  |
| Pears, quartered, unpeeled Bartlett's.....               | 4½@ 5½  |
| Plums, Black, pitted.....                                | 4½@ 5   |
| Plums, White and Red.....                                | 5½@ 6½  |
| Prunes, Silver.....                                      | 4½@ 6   |

## COMMON SUN-DRIED.

|                        |        |
|------------------------|--------|
| Apples, sliced.....    | 2½@ 3  |
| Apples, quartered..... | 2½@ 3½ |
| Figs, Black.....       | 2 @ 2½ |
| Figs, White.....       | 3 @ 3½ |
| Peaches, unpeeled..... | 4 @ 5  |

Prices for new crop Prunes, as named by the California Cured Fruit Association: Santa Clara,

four sizes, 3c. per lb.; 40-50s, 7c.; 50-60s, 5½c.; 60-70s, 3½c.; 70-80s, 3¼c.; 80-90s, 2¾c.; 90-100s, 2¼c.; 100-120s, 2c., which is the uniform price for this grade; Sonomas, other than smallest, ¼c. less; other districts, ¼c. less, except for smallest; Ruby, ¼c. premium.

Mail advices of recent date from New York City furnish the following report of the dried fruit market:

Demand for evaporated apples has been active and the recent advance well sustained until the close, when speculators have covered all October contracts and market has eased off again to 4½@4¾c. for prime, latter figure rather full, with other grades selling slowly in ranges quoted; prime are offered for next month's delivery at 4½@4¾c., and for December delivery at 4¼@4¾c. Sun-dried apples in light supply and firm. Remaining stocks of chops and waste are very poor and of low and uncertain value; new fruit offering to arrive at 1½c. for chops and 1c. for cores and skins. Small fruits continue scarce and very high. California fruit is meeting a steady jobbing demand at about former prices.

|                                                   |         |
|---------------------------------------------------|---------|
| Apricots, Cal., Moorpark, 1900.....               | 10 @ 15 |
| Apricots, Cal., Royal, 1900, ½ lb.....            | 8 @ 9   |
| Peaches, Cal., unpeeled, 1900, in bxs, ½ lb.....  | 7 @ 9½  |
| Peaches, Cal., unpeeled, 1900, in bags, ½ lb..... | 7 @ 9   |
| Prunes, Cal., ½ lb.....                           | 4 @ 8½  |

## RAISINS.

There has been a lull in the raisin market the past week, the first experienced since this season's stock has been ready for distribution. It is believed to be only temporary. That trade should have continued uninterrupted as active as early in the season was not to have been anticipated. Considerably over half the crop has been disposed of, including practically all the high grade or fancy raisins and also the seedless. Remaining stocks are largely 3 and 4 crown loose Muscatel.

## F. O. B. FRESNO DELIVERY.—CARLOAD LOTS.

|                                              |         |
|----------------------------------------------|---------|
| Imperial Clusters, 6-crown, ½ 20-lb box..... | 3 00 @— |
| Dehesa Clusters, 5-crown.....                | 2 50 @— |
| Fancy Clusters, 4-crown.....                 | 2 00 @— |
| London Layers, 3-crown, ½ box.....           | 1 60 @— |
| do do 2-crown, ½ box.....                    | 1 50 @— |

(Usual advance for fractions.)

|                                             |        |
|---------------------------------------------|--------|
| Loose Muscatel, 4-crown standard, ½ lb..... | — @ 7  |
| Loose Muscatel, 3-crown.....                | — @ 6½ |
| Loose Muscatel, 2-crown standard.....       | — @ 6  |
| Loose Muscatel, seedless.....               | — @ 6½ |

Thompson Seedless.—Bleached fancy, ½ lb., 12c; choice, 11c; standard, 10c; prime, 9c. Unbleached, 9c.

Sultanas.—Bleached fancy, ½ lb., 10½c; choice, 9½c; standard, 8½c; prime, 8c. Unbleached, 8c.

## CITRUS FRUITS.

Oranges were in fairly liberal receipt for this early date, and it would have been better if much of this fruit had been left on the trees until more fully matured. Only ripe oranges were sought after and not many of these were required to satisfy the demand at extreme figures. The lemon market was slow and weak for the ordinary run of offerings, which show poor average quality. A few choice to select sell fairly well. Limes are offering at unchanged rates, with supplies ample for current needs.

|                                       |             |
|---------------------------------------|-------------|
| Oranges—Navel, ½ box.....             | 2 50 @ 4 50 |
| Valencia, ½ box.....                  | — @—        |
| Seedlings, ½ box.....                 | 1 75 @ 2 25 |
| Grape Fruit, ½ box.....               | 2 00 @ 4 00 |
| Lemons—California, select, ½ box..... | 2 25 @—     |
| California, good to choice.....       | 1 50 @ 2 00 |
| California, common to fair.....       | 50 @ 1 00   |
| Limes—Mexican, ½ box.....             | 4 00 @ 4 50 |
| California, small box.....            | 50 @ 75     |

## NUTS.

The almond market is slow. There are some small lots offering for which holders find it impossible to realize full current figures. Although not quotably lower, the walnut market is very quiet. Offerings from first hands received scarcely any attention this week.

|                                            |          |
|--------------------------------------------|----------|
| California Almonds, shelled.....           | 24 @ 27  |
| California Almonds, paper shell, ½ lb..... | 13 @ 15  |
| California Almonds, soft shell.....        | 10½@ 12½ |

|                                           |         |
|-------------------------------------------|---------|
| California Almonds, hard shell.....       | 7 @ 8   |
| Walnuts, White, soft shell.....           | 8½@ 10½ |
| Walnuts, White, California, standard..... | 7½@ 10  |
| Chestnuts, California Italian.....        | 6 @ 8   |
| Peanuts, California, fair to prime.....   | 4 @ 5½  |
| Peanuts, Eastern, hand-picked.....        | 6 @ 6½  |
| Pine Nuts.....                            | 5 @ 6   |

## WINE.

There is no evidence of much doing in new wine, although the market shows a firm tone. Some new dry wine of good quality is offering in Sonoma county at 16c per gallon. Good to choice Napa is quotable at 16@18c in the cellars. The range on Sonoma county product may be said to be 15@17c, and for new claret from sections south of San Francisco 14@16c. In exceptional instances better prices may be realized, but higher figures are not at this date warranted as quotations.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

| FOR THE WEEK.        | Since July 1, 1900. | Same time last year. |
|----------------------|---------------------|----------------------|
| Flour, ¼ sacks.....  | 93,221              | 2,024,245            |
| Wheat, centals.....  | 26,349              | 1,886,073            |
| Barley, centals..... | 77,139              | 2,065,707            |
| Oats, centals.....   | 15,640              | 369,520              |
| Corn, centals.....   | 820                 | 30,505               |
| Rye, centals.....    | 1,720               | 91,922               |
| Beans, sacks.....    | 62,034              | 257,605              |
| Potatoes, sacks..... | 34,090              | 560,332              |
| Onions, sacks.....   | 3,440               | 99,593               |
| Hay, tons.....       | 2,553               | 77,420               |
| Wool, bales.....     | 731                 | 17,086               |
| Hops, bales.....     | 194                 | 4,729                |

## EXPORTS BY SEA.

| FOR THE WEEK.           | Since July 1, 1900. | Same time last year. |
|-------------------------|---------------------|----------------------|
| Flour, ¼ sacks.....     | 132,340             | 1,043,904            |
| Wheat, centals.....     | 12,754              | 1,731,832            |
| Barley, centals.....    | 54,823              | 1,310,187            |
| Oats, centals.....      | 5,846               | 46,527               |
| Corn, centals.....      | —                   | 18,075               |
| Beans, sacks.....       | 89                  | 6,151                |
| Hay, bales.....         | 3,826               | 77,849               |
| Wool, pounds.....       | —                   | 233,621              |
| Hops, pounds.....       | 50,033              | 286,294              |
| Honey, cases.....       | 7                   | 1,467                |
| Potatoes, packages..... | 3,837               | 31,196               |

## California Dried Fruit at New York.

NEW YORK, Nov. 7.—Evaporated apples, common, 3@4c; prime wire tray, 4½@5½c; choice, 5½@6c; fancy, 6@6½c.

California dried fruits.—A light business doing at generally unchanged prices.

Prunes, 3½@8½c.

Apricots, Royal, 11@14c; Moorpark, 15@17c.

Peaches, unpeeled, 6@9c; peeled, 16@20c.

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### Rights of Employees to Their Inventions.

By a recent decision of a German court an employe in that country has no right to any invention he may make so long as he remains an employe. The following statement of the relations between employers and men in the United States as regards inventions made by the latter is of interest:

"In general, the law secures to every man the ownership of his own inventions and of the patent granted therefor. But this general principle is much modified by the special relations existing between the employe and his employer in particular cases. A wide distinction is made between the person who is employed merely as a skilled workman and the person who is employed as an inventor.

"As to the former: If a skilled workman, while in the employ of another, but in his own time or after working hours, conceives an invention and constructs it at his own expense, using his own tools and materials, and doing the work after hours or in time his employer does not pay for, then the invention, as well as the patent granted therefor, is the exclusive property of the workman. The employer has no rights in it, nor any right to use it in his business, even though it is adapted to that business. The employer in this case can obtain the right to use the invention only by contracting with the workman for it and paying the price agreed upon. But if the workman conceives the invention in the time his employer pays for, and constructs it with his employer's tools and materials and in the employer's time, then the employer obtains certain rights in the invention and patent granted therefor.

"If the invention is a machine, then the machine belongs to the employer, and he has a license to use it in his business and to keep it in repair, and without paying any royalty to the workman therefor. If the employe obtains a patent for the invention and sells it, that sale will be subject to the license to the employer, and the purchaser of the patent cannot prevent the employer from continuing the use of the machine.

"If the invention is not a machine, but is an article of manufacture, as a tool in which the employer deals, then, in the circumstances supposed, the employer has a license to make and sell such tools without paying royalty, even after the patent is granted, and neither the inventor nor the purchaser of the patent can stop him from continuing to do so. In each case the employer's license continues over to any corporation into which the employer's business is converted.

"If the invention is a process, then the employer, or the corporation which continues his business, has a license to use that process without paying royalty, even after the patent is granted to the workman.

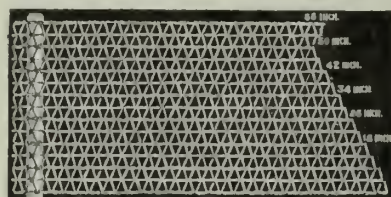
"In these cases, however, the license to make and sell the machine or the article and to operate the process is not exclusive—that is, it does not give the sole right to the employer; it only secures to him a right to the invention in connection with his particular business; and the inventor, or those to whom he sells the patent, can make, use and sell the invention, and license others to do so, without let or hindrance from the employer.

"As to persons employed to invent: If a person is employed by another to make inventions to be used in the employer's business, and is paid salary or wages on the understanding that his services are to be those of an inventor in improving the machines, tools or processes which relate to the employer's business, then the inventions which the employe makes relating to that business and the patents granted therefor are the exclusive property of the employer. In such cases the court says that the employe, in making and perfecting inventions, is merely doing what he was hired to do.

"Should the employe leave that employ, he cannot use, or make, or sell the invention, or convey any rights to others under it, except with the consent of the employer."

### Manufacture of Circular Saws.

Circular saws are made of cast steel specially manufactured for the purpose. A steel ingot heated to the requisite temperature is reduced to the proper thickness in powerful rolls. The plate is then centered and a circle scribed upon it, after which it is passed to the shearer, who reduces it to a circular form. The center hole is then bored; it is handed to the toother, who punches out the teeth around the edge, after which they are rough filed or ground on an emery wheel, to take off the burr left for punching. The rough saw is now again heated in a large furnace until it is of bright red color, then plunged into a bath of sperm oil, which makes it hard and brittle. The oil is then partly cleaned off, and the rest burnt off in a furnace to give the saw the required temper. When cold the saw is hammered on a steel-faced anvil until it is straight. It is next ground between vertical grindstones revolving in opposite directions, and then polished with emery on a large disk. Once more the hammer men take it and strike it with smooth-faced hammers on an anvil as before, until it is absolutely straight and true and has acquired the proper tension, which allows for expansion while the saw is revolving at work. The teeth are now set, alternately right and left, to allow for clearances when sawing timber. They are then sharpened by being filed on the front and tops of the teeth, which operation completes the manufacture.



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is still in the lead. Reports from the THREE GREAT FAIRS of the Pacific coast show that after meeting the best herds in California, Oregon and Washington, we can rightfully claim to have the Champion Herd of the coast. Look at the record: California State Fair, 15 ribbons; Oregon State Fair, 18 ribbons; San Francisco and San Mateo Fair, 20 ribbons, making a total of 53 ribbons. Our large sales to visitors to the fairs show what they thought of the stock, and we have very few salable pigs left. If you are in need of stock, write us and we will describe what we have.

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This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

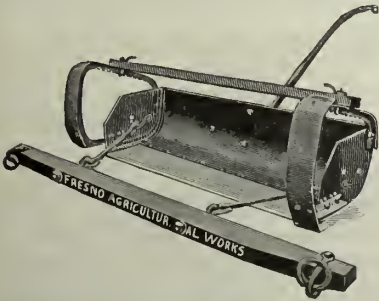
For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

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Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.

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4 in. to 6 ft. Through

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5 to 9 cords daily is the usual average for one man.



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Population of California Counties and Towns.

Last week we gave from telegraphed reports a summary of the Census of California for 1900. The official copy by mail furnishes data for some corrections, which are embodied in the tables below:

POPULATION BY COUNTIES.

|                 | 1900.   | 1890.   |
|-----------------|---------|---------|
| Alameda         | 130,197 | 93,864  |
| Alpine          | 509     | 667     |
| Amador          | 11,116  | 10,320  |
| Butte           | 17,117  | 17,939  |
| Calaveras       | 11,200  | 8,882   |
| Colusa          | 7,346   | 14,640  |
| Contra Costa    | 18,046  | 13,515  |
| Del Norte       | 2,408   | 2,592   |
| El Dorado       | 8,986   | 9,232   |
| Fresno          | 37,862  | 32,026  |
| Glenn           | 5,150   | .....   |
| Humboldt        | 27,104  | 23,469  |
| Inyo            | 4,377   | 3,544   |
| Kern            | 16,480  | 9,808   |
| Kings           | 9,871   | .....   |
| Lake            | 6,017   | 7,101   |
| Lassen          | 4,511   | 4,239   |
| Los Angeles     | 170,298 | 101,454 |
| Madera          | 6,364   | .....   |
| Marin           | 15,720  | 13,072  |
| Mariposa        | 4,702   | 3,787   |
| Mendocino       | 20,465  | 17,612  |
| Merced          | 9,215   | 8,085   |
| Modoc           | 5,076   | 4,986   |
| Mono            | 2,167   | 2,002   |
| Monterey        | 19,380  | 18,637  |
| Napa            | 16,451  | 16,411  |
| Nevada          | 17,789  | 17,369  |
| Orange          | 19,696  | 13,589  |
| Placer          | 15,786  | 15,101  |
| Plumas          | 4,657   | 4,933   |
| Riverside       | 17,897  | .....   |
| Sacramento      | 45,915  | 40,339  |
| San Benito      | 6,633   | 6,412   |
| San Bernardino  | 27,929  | 25,497  |
| San Diego       | 35,090  | 34,987  |
| San Francisco   | 342,782 | 298,997 |
| San Joaquin     | 35,452  | 28,629  |
| San Luis Obispo | 16,637  | 16,072  |
| San Mateo       | 12,094  | 10,087  |
| Santa Barbara   | 18,934  | 15,754  |
| Santa Clara     | 60,216  | 48,005  |
| Santa Cruz      | 21,512  | 19,270  |
| Shasta          | 17,318  | 12,133  |
| Sierra          | 4,017   | 5,051   |
| Siskiyou        | 16,962  | 12,163  |
| Solano          | 24,143  | 20,946  |
| Sonoma          | 38,480  | 32,721  |
| Stanislaus      | 9,550   | 10,040  |
| Sutter          | 5,886   | 5,469   |
| Tehama          | 10,996  | 9,916   |
| Trinity         | 4,383   | 4,719   |
| Tulare          | 18,375  | 24,574  |
| Tuolumne        | 11,166  | 6,082   |
| Ventura         | 14,367  | 10,071  |
| Yolo            | 13,618  | 12,684  |
| Yuba            | 8,620   | 9,636   |

POPULATION OF TOWNS.

|                       | 1900.   | 1890.   |
|-----------------------|---------|---------|
| Alameda, city         | 16,464  | 11,165  |
| Auburn, city          | 2,050   | 1,595   |
| Bakersfield, city     | 4,836   | 2,626   |
| Benicia, city         | 2,751   | 2,361   |
| Berkeley, town        | 13,214  | 5,101   |
| Chico, city           | 2,640   | 2,894   |
| Eureka, city          | 7,327   | 4,858   |
| Fresno, city          | 12,470  | 10,818  |
| Grass Valley, city    | 4,719   | .....   |
| Hanford, city         | 2,929   | 942     |
| Long Beach, city      | 2,252   | 564     |
| Los Angeles, city     | 102,479 | 50,395  |
| Marysville, city      | 3,497   | 3,991   |
| Modesto, city         | 2,024   | 2,402   |
| Napa, city            | 4,036   | 4,395   |
| Nevada City, town     | 3,250   | 2,524   |
| Oakland, city         | 66,960  | 48,682  |
| Pasadena, city        | 9,117   | 4,882   |
| Petaluma, city        | 3,871   | 3,692   |
| Pomona, city          | 5,526   | 3,634   |
| Red Bluff, city       | 2,750   | 2,608   |
| Redding, city         | 2,946   | 1,821   |
| Redlands, city        | 4,797   | 1,904   |
| Riverside, city       | 7,973   | 4,683   |
| Sacramento, city      | 29,282  | 26,386  |
| Salinas, city         | 3,304   | 2,339   |
| San Bernardino, city  | 6,150   | 4,012   |
| San Diego, city       | 17,700  | 16,159  |
| San Francisco, city   | 342,782 | 298,997 |
| San Jose, city        | 21,500  | 18,060  |
| San Leandro, town     | 2,253   | .....   |
| San Luis Obispo, city | 3,021   | 2,995   |
| San Rafael, city      | 3,879   | 3,290   |
| Santa Ana, city       | 4,933   | 3,628   |
| Santa Barbara, city   | 6,587   | 5,864   |
| Santa Clara, town     | 3,650   | 2,891   |
| Santa Cruz, city      | 5,659   | 5,596   |
| Santa Monica, city    | 3,057   | 1,580   |
| Santa Rosa, city      | 6,673   | 5,220   |
| Stockton, city        | 17,506  | 14,424  |
| Tulare, city          | 2,216   | 2,697   |
| Vallejo, city         | 7,965   | 6,343   |
| Ventura, city         | 2,470   | 3,869   |
| Visalia, city         | 3,085   | 2,885   |
| Watsonville, city     | 3,528   | 2,149   |
| Woodland, city        | 2,886   | 3,069   |

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are outside of the Trust, shouldn't you buy PAGE  
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PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.



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Cleaner, cheaper. No smoke house needed. Send  
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Are now offered for sale in lots of from 5 TO 40 ACRES. This is the most fertile body of land ever placed on the market, and is located in the FINEST FRUIT SECTION IN THE STATE. It is a living testimonial of the varied fruit and cereal productions that can be grown in the State.

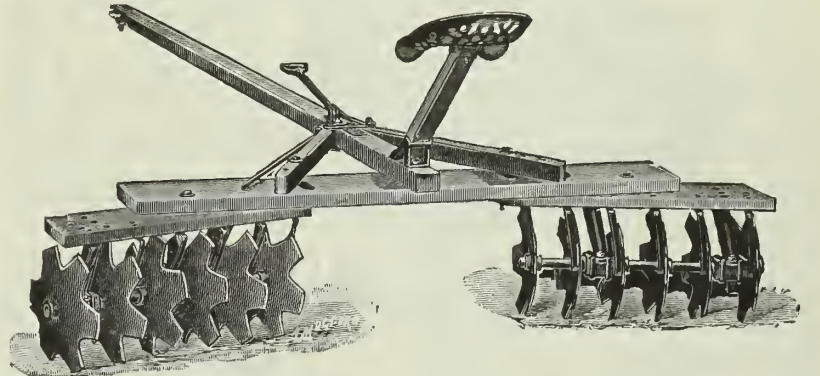
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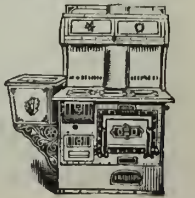
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\$50.00 RANGE FOR \$25.00

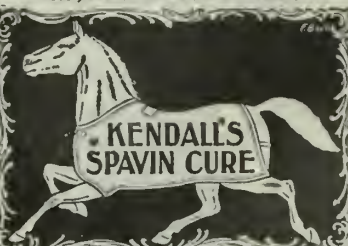
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we will for a short time deliver at your  
depot free of charge our highest grade Steel range for \$25.00. The regular retail  
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12 inches high, 17 inches wide and 21 1/4 inches deep, and 15-gallon reservoir.  
Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet.  
Best Range made. WM. G. WILLARD, Manufacturer, 619 N. Fourth  
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**THE OLD RELIABLE REMEDY**  
For Spavins, Ringbones, Splints, Curbs,  
etc., and all forms of Lameness



**KENDALL'S SPAVIN CURE**

Certain in its effects and does not blister or blister.

Holstein, Iowa, Feb. 19, 1898.

Dear Sir:—Please send me one of your Treatise on the Horse. I have a mare that had a Ringbone. I used one bottle of Kendall's Spavin Cure, after I used it two weeks my horse got well. I think it is the best medicine in the world for horses.

Yours truly,  
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DR. B. J. KENDALL CO., ENOSBURG FALLS, VT.

## Patrons of Husbandry.

### Another Grange Reorganized.

National Deputy D. M. Winans of Petaluma reorganized Antelope Grange No. 100 at Sites, Colusa county, Oct. 20th, with thirty members. The following officers were elected and installed: Master, P. R. Peterson; Overseer, O. Pearson; Lecturer, J. D. S. Taylor; Steward, W. Malloway; Asst. Steward, R. Pryor; Chaplain, Miss Rena Pryor; Treasurer, Miss Josie Bieler; Secretary, Miss Grace Peterson; Gate Keeper, B. Pryor; Pomona, Miss Rose Shearn; Flora, Miss Neita Peterson; L. A. S., Mrs. Malloway; Trustee (one year), N. Pearson; Trustee (two years), J. Shearn; Trustee (three years), M. H. A. Logan.

The members and officers of this Grange are mostly young and with more than ordinary talent, and it is fair to expect that it will never become dormant again.

### Grange Revivals.

TO THE EDITOR:—Herewith I present to you a statement of new Granges organized and Granges reorganized from Oct. 1, 1899, to Oct. 1, 1900: New Granges organized—California 6, Colorado 2, Connecticut 1, Illinois 5, Indiana 15, Maine 4, Massachusetts 1, Michigan 84, New Hampshire 6, New Jersey 3, New York 16, Ohio 24, Oregon 2, Pennsylvania 9, Vermont 4, Wisconsin 1. Total, 183. Granges reorganized in same period, 70. Granges organized from Oct. 1, 1898, to Oct. 1, 1899, 146; Granges reorganized from Oct. 1, 1898, to Oct. 1, 1899, 52. These figures show that the Order of Patrons of Husbandry is in a very prosperous condition. Should any farmer who reads this statement desire to have a Grange organized in his locality, by communicating the wish to me the wants will be attended to with great pleasure.

Petaluma. D. M. WINANS.

### Santa Rosa Grange.

As reported by the Farmer, Santa Rosa Grange met in Odd Fellows' hall last week and instructed a class in the first two degrees. Another class will be instructed in the same degrees this week and then the third and fourth degrees will be conferred on the morning of the fourth Saturday in November with a harvest feast at noon, to be followed by an interesting afternoon session.

Pomona Grange has received a letter from Hon. Frank L. Coombs endorsing the rural mail delivery and favoring the election of U. S. Senators by a direct vote of the people.

### Catarrh Cannot be Cured

With LOCAL APPLICATIONS, as they cannot reach the seat of the disease. Catarrh is a blood or constitutional disease, and in order to cure it you must take internal remedies. Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces. Hall's Catarrh Cure is not a quick medicine. It was prescribed by one of the best physicians in this country for years, and is a regular prescription. It is composed of the best tonics known, combined with the best blood purifiers, acting directly on the mucous surfaces. The perfect combination of the two ingredients is what produces such wonderful results in curing Catarrh. Send for testimonials, free.

F. J. CHENEY & CO., Props., Toledo, O.  
Sold by druggists, price 75c.  
Hall's Family Pills are the best.

### Tulare Grange.

TO THE EDITOR:—Tulare Grange met at its hall on Saturday, the 3rd. After opening ceremonies and a lunch the first and second degrees were conferred in impressive manner on a class of two by Bro. E. C. Shoemaker.

The proposed constitutional amendments were considered, each one separately, and resolutions passed approving some and condemning others. [We omit the discussion, as the whole matter was voted upon on Tuesday last.—Ed.]

Owing to the time taken in considering the proposed amendments the subject for the day, "What is the Duty of the Grange in Support of Public Schools in the Formation of Character?" was laid over until next meeting.

J. T.

## Seeds, Plants, Etc.

## LOGANBERRIES!

I offer a fine stock of Loganberries: one-year-old transplanted vines and rooted tips. Orders from the trade solicited. Write for prices.

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75,000 budded trees now ready for this season's trade.

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On Citrus Trifoliata Stock.

The earliest variety and the hardest stock. Tree thornless and fruit seedless. Also all the prominent varieties of Oranges and Pomeles on both Sour and Citrus Trifoliata stocks. A full line of fruits and ornamentals.

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### LARGE ASSORTMENT.

Grape Vines and Cuttings,  
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We hench graft RUPESTRIS ST. GEORGE under contract.

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## Apple Seedlings.

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First-class, 3-16 inch and up, straight.  
Second class, 2-16 to 3-16 inch, straight.  
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These Seedlings are equal to any on the market, and offered at reasonable prices. We also have a large stock of Root Grafts. Address  
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**Large Stock** of Royal Apricot; Grafted Walnut; Yellow Newtown Pippin, Yellow Bellefleur and W. W. Pearmain Apples.  
**Fine Trees** of Washington Navel, Thompson's Improved Navel and Valencia Late Oranges.

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## Nitrate of Soda as a Fertilizer.

### SICK CROPS

—the faded out, yellow kind that are not doing well may be instantly revived by the application of a dressing of

### NITRATE OF SODA.

It acts at once because it is very soluble. This makes it instantly available as plant food; 100 to 200 lbs. per acre is sufficient for most crops.

This is the most concentrated fertilizer on the market.

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is necessary to bring out the flavor and quality of Fruits, and promote the growth of all kinds of Cereals. Most California soils are deficient in this important plant food, which is being steadily depleted by continual cropping, and must be replaced to obtain good yields. Try an application of

## THOMAS' PHOSPHATE POWDER, (Basic Slag)

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## List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
PIONEER PATENT SOLICITORS  
FOR PACIFIC COAST.

FOR THE WEEK ENDING OCT. 23, 1900

- 660,356.—WATER GATE—C. H. Baker, Topia, Mexico.  
660,178.—FLUSHING TANK—C. J. Ball, Los Angeles, Cal.  
660,362.—FRUIT PACKING FORM—S. L. Casella, Alma, Cal.  
660,147.—FIRE HOSE NOZZLE—B. C. Crane, Montesano, Wash.  
660,370.—PITCHER COVER—Drennan, Smith & Graham, Bodie, Cal.  
660,491.—CAR COUPLING—C. E. C. Edey, Tacoma, Wash.  
660,498.—LEACHING ORES—J. A. Fleming, Globe, A. T.  
660,499.—LEACHING ORES—J. A. Fleming, Globe, A. T.  
660,371.—HEATER—Kate J. Foley, Berryessa, Cal.  
660,542.—RIVETING MACHINE—S. Foreman, Sacramento, Cal.  
660,105.—SAW SHARPENER—J. W. Green-Portland, Or.  
660,373.—POWDER MILL—F. A. Halsey, San Rafael, Cal.  
660,429.—BOILER—P. W. Hanford, Oakesdale, Wash.  
660,507.—LIFTING JACK—J. T. Harbin, Condon, Or.  
660,108.—ADDING MACHINE—A. Hoch, Alameda, Cal.  
660,438.—WINDOW SASH—G. W. Holly, Palo Alto, Cal.  
660,342.—ORE SEPARATOR—J. P. Smith, Denver, Colo.  
660,319.—TOOTH CROWNS—J. F. Twist, S. F.  
660,408.—HOP DRIER—A. Wolf, Silverton, Or.  
660,409.—ROCK DRILL—C. E. Young, Fremont, Wash.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey, Strong & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

**TRAVELING HARVESTER.**—No. 657,700, Sept. 11, 1900. Benjamin Holt, Stockton, Cal. The object of this invention is to enable a traveling harvester and thresher to be used on side hills and maintain the frame of the thresher and cleaner in an approximately horizontal position by raising the wheels on one side and lowering the wheels on the other side with relation to the thresher frame, so that while the wheels travel in different horizontal planes upon the inclined surface of the ground, the threshing machine frame will be maintained in the desired position. In conjunction with these movable wheels there are mechanisms by which the up and down movement of the wheels effected simultaneously. It comprises a main frame with supplemental frames in which the bearing wheels are journaled upon opposite sides of the machine. A rack bar is guided and slidable transversely with relation to the main frame, with a mechanism by which the rack bar is movable in either direction. Chains connected with the bar extend outwardly in opposite directions and there are guide pulleys around which the chains pass, standards carried by the wheel frames to which the outer ends of the chains are connected, anti-frictional rollers or slides carried by the movable wheel frames, and fixed guides against which they are movable.

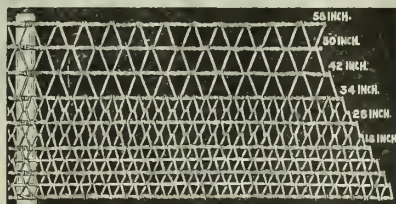
**BICYCLE BRAKE.**—No. 658,119. Sept. 18, 1900. Wm. H. Parsons, Great Western Mine, Cal. This invention is designed to provide a novel brake for bicycles and the means for operating the same. It consists of a supplemental rim or extension carried by the driving wheel of the machine, a segmental band having one end fixed to the upwardly extending fork, and a fulcrum lever to which the other end is attached. A sprocket wheel is turnable journaled upon said lever in line with the lower part of the driving chain, where it passes between the pedal shaft and rear axle sprockets so that when the pedals are pressed backwardly or against the forward movement of the machine, the tension of the chain will press upon the sprocket, and act through it and the lever to pull the band into frictional contact with the rim, sufficiently to retard or stop the progress of the machine.

Edith—Nurse says there is no pleasure without its pain.

Nelly—Yes, I know that's true. Even breakfast in bed has its crumbs.

## ELLWOOD STEEL FENCES.

The development of the wire industry in America has been great in the last decade, and the improvement in quality of wire used in the Ellwood woven wire fences, advertised elsewhere in this issue, is held up by its makers as one of the best evidences. This wire is a hard steel wire, especially made to resist the sort of wear and tear to which a fence is subjected, and it is specially galvanized with a heavy coating, in order to insure against rust and guarantee a long life.

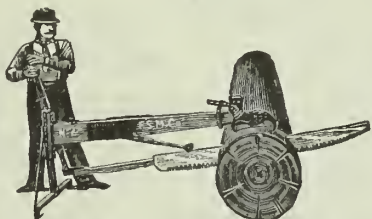


The Ellwood fences comprise several varieties or styles, furnished in heights from 18 to 58 inches. The Ellwood standard style is the leader of these fences, the 26 inch height of this fence being a great favorite as a hog and pig fencing. The Ellwood special fence is similar to the standard, but is somewhat lighter, by reason of the use of less wire in a wider mesh. The Ellwood Perfect, the Ellwood Lawn, the Ellwood Poultry and Rabbit, and Ellwood Crib are the other styles of Ellwood fencing designed for particular uses, but each complete and efficient for general use as well.

The Ellwood Lawn fence is particularly adapted to parks and cemeteries and enclosures in towns and cities when a particularly strong fence is required. The Ellwood Poultry and Rabbit fence, as its name implies, is particularly adapted to enclosures for fowls and smaller animals. The Ellwood Crib material is especially designed for stationary or portable corn cribs, being a cheap, durable and economical substitute for wood and superior to wood because it affords no breeding places for vermin and prevents the secretion of moisture.

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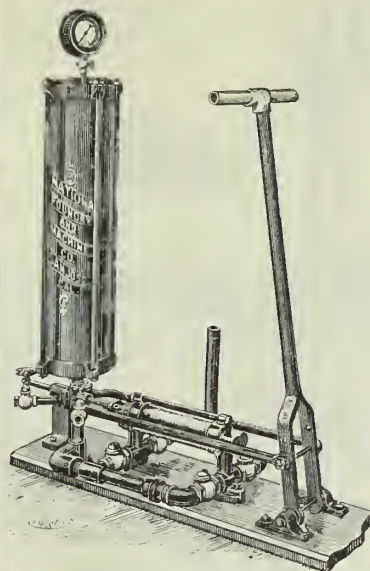
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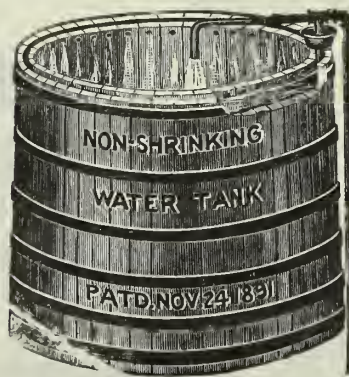
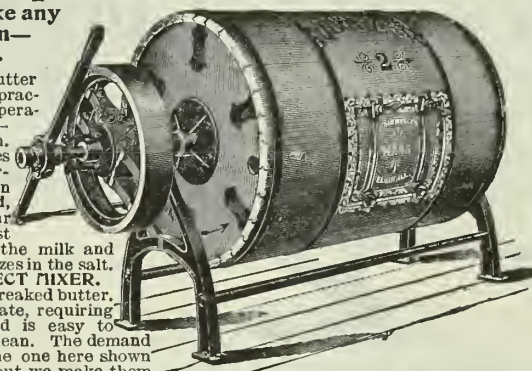
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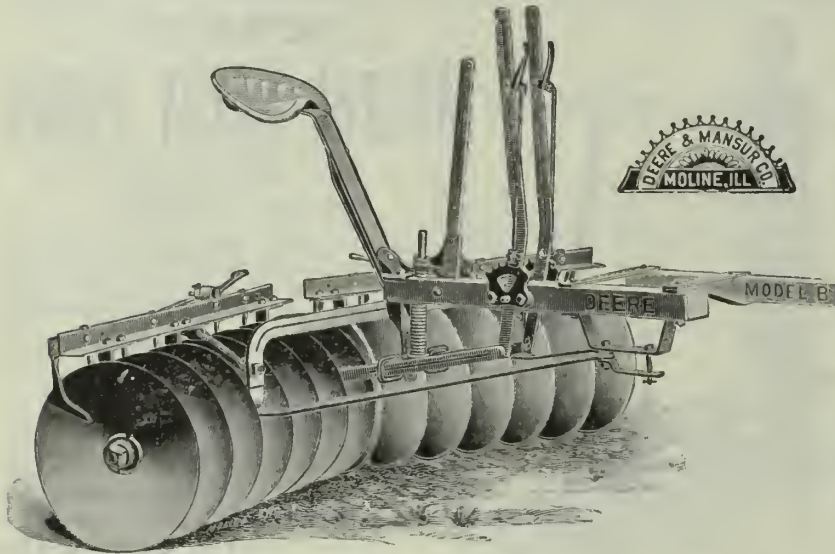
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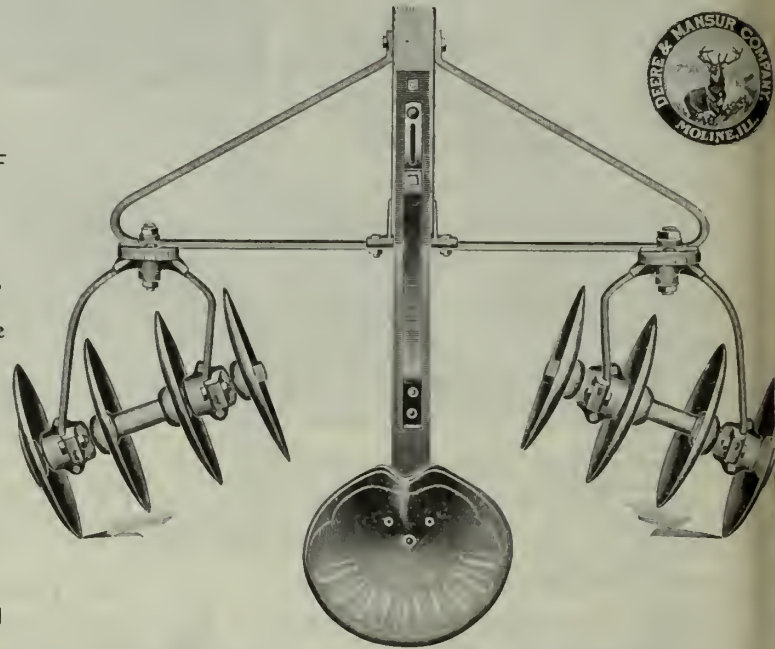


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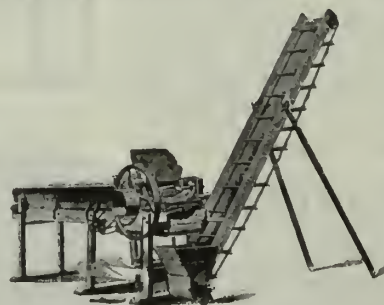


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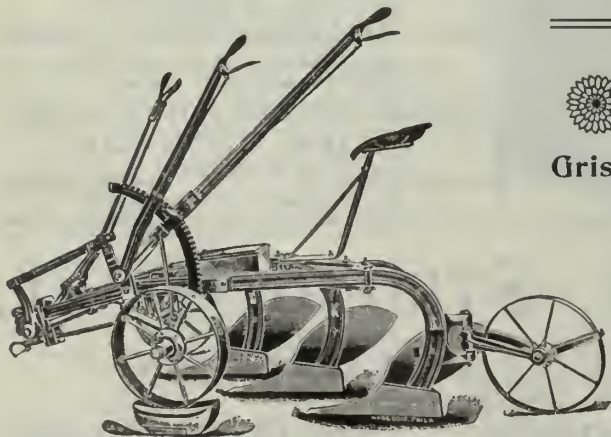


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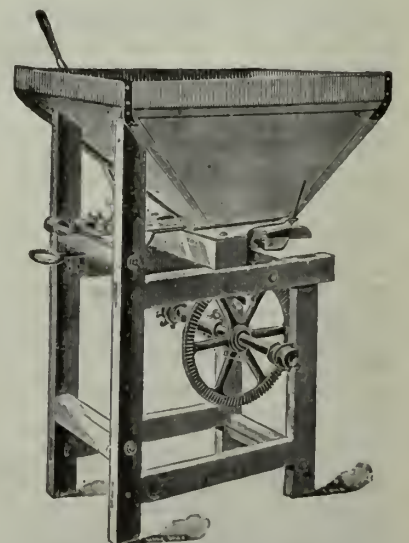
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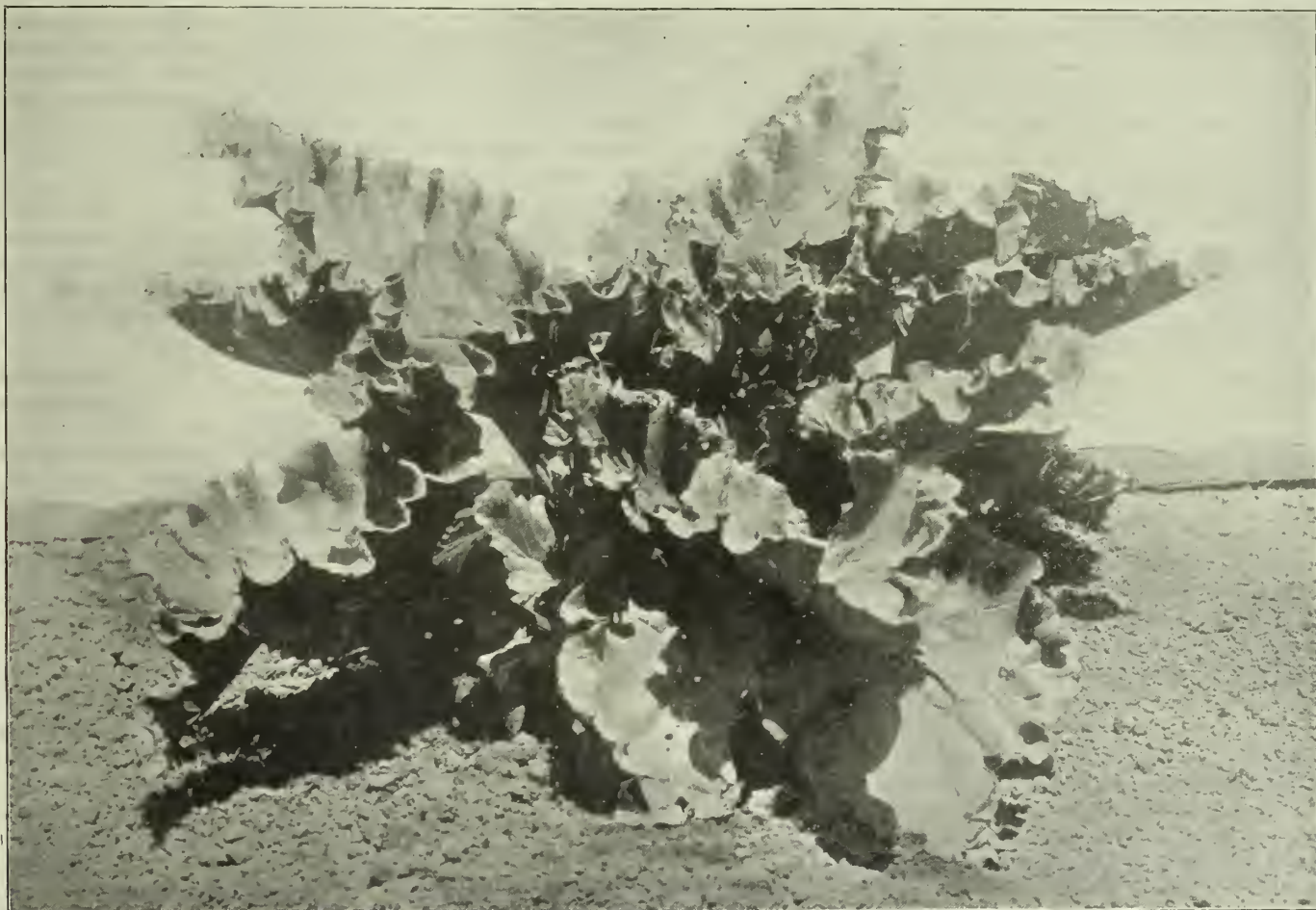
Vol. LX. No. 20.

SAN FRANCISCO, SATURDAY, NOVEMBER 17, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

## A New Early Rhubarb.

The growth of rhubarb for local sale and for shipment to Eastern markets is a special undertaking which is of considerable moment, but probably not widely known. It is a question whether the product could stand much expansion without dropping the price too low to pay well, and it is a fact that to reach the high prices the plant must be in a place favoring early growth, for it is the early rhubarb that catches the coin. More than this, rhubarb enjoys a rather moist and strong soil and finds them largely in the bay region and on the low lands along the interior rivers and on the southern coast. The thermal belts in other parts of the State, however, also do something in rhubarb; and when it comes to growing home supplies, every farmer's garden should have a few hills well fed and watered and protected from excessive sun heat in parts of the State where such heat is too ardent for the summer thrift of the leaves, because it is their work which strengthens the root and enables it to endure the strain of the winter and spring plucking. With the market growers of rhubarb extra earliness is a desideratum, and they will all be interested in the fact that Luther Burbank has given attention to this particular want. We received from him a few days ago a bundle of leaf stems of fair size for such early growth from this year's seedling plants. He has the hardest work to get these young plants dormant enough for digging and shipping. The whole field was closely mown, but eight days afterwards the leaves covered the ground again, making good merchantable stalks when of the older kinds few, if any, stalks are in good condition. Mr. Burbank has had this variety under observation for six years, so that he should know its paces very well. It starts to grow vigorously by October, and continues to produce stalks until after the common varieties make their first appearance some six months later. In



Luther Burbank's New Rhubarb—Australian Crimson Winter.

California it takes a short rest during midsummer; but, if kept moist, will produce stalks abundantly at any season.

## Caprifig Figs.

Our readers are no doubt ready to admit from the host of facts which we have given them that the fig insect from Smyrna produces a very marked effect upon certain varieties of figs which it visits, but we doubt if any, who have not seen the fruit, have pictured to themselves any such wonderful effects as are shown by the pictures on this page. The figs here shown were grown on Mr. Roeding's place at Fresno. The photographs were made by Dr. Loughridge of the State University to represent the same variety of figs when grown with and without the aid of the insect. The sizes are true to nature, and the wonderful increase in size of the caprifigged specimens of both

varieties, as well as the filling of the centers with luscious pulp, is too obvious in the pictures to need description.

There is another interesting point about the varieties shown. From the frequent mention of the Smyrna fig, it may have been thought that only a single variety was affected by caprifigation. This would be a false impression. There is a class of varieties which is dependent upon this insect for satisfactory development, and this class includes kinds for the table as well as the kind which is of distinctive value for drying. Mr. Roeding has a number of these varieties, and the introduction of the blastophaga will turn them all to profitable account. Reference to the engravings shows that the fig retains the same general form with and without fertilization.



FERTILIZED.

The Secker Endjere Fig.



NOT FERTILIZED.

NOT FERTILIZED.



FERTILIZED.

The Bardajic Fig.



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E. J. WICKSON.....Horticultural Editor.

San Francisco, November 17, 1900.

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## The Week.

The great heat and drying winds are not welcome to those who are waiting for more moisture to fit their lands for working. Nor do the current weather conditions carry much assurance of the thorough soaking for which the whole State is waiting and longing. Still, the weather is very favorable for many kinds of outdoor work and should enable the fruit grower to come to the real winter with his work well ahead and the ground in good condition for rain. There is no advantage in very heavy fall rains, except, perhaps, as prophets, because the great rainfall years have generally had them. In some parts of the State the rainfall thus far is up to the normal, and there is still time enough for all to get what is needed. People are in good courage and active. City trade in some lines—as, for instance, in seeds—is brisk and merchants are put to it to secure adequate supplies. The nursery trade also should be very good this year, for our correspondence discloses quite an interest in planting. If the time is well employed in getting everything ready for the rains, they will come much sooner and be a great deal wetter.

Wheat has been doing better, but at close does not show firmest condition of the week. Two cargoes of this cereal were dispatched for Europe the past week. Barley is not quotably lower, but is more quiet. Oats are being steadily held, with supplies mainly Reds and Blacks; Grays are wholly out of stock. Corn is offering a little more freely, but at no material change in prices. Rye is a trifle steadier. Buckwheat is beginning to put in an appearance and is selling fairly well. Hay remains as last quoted; stocks do not appear to be heavy and prices may harden later on; it is largely a weather proposition. Bran is lower and market for all mill offal is weak. The live stock market is firm throughout, beef, mutton, and hogs of desirable size, all bringing improved figures. Butter continues on down grade, with offerings largely of low average quality. Cheese is bringing good prices. Egg values are tumbling, the result of having forced the market too high. The only improvement in the poultry department is for broilers and fryers, which are in good request; Eastern poultry continues plentiful. Beans are ruling quiet, with most kinds steadily held; Pinks show weakness. Dried peas are scarce and market firm. Potatoes are fairly steady for choice, while common are weak and dull. Onions are again marked up and are likely to be a luxury before another season opens. Market is all right for choice to fancy apples and pears, and all wrong for poor. Oranges are lower and more plentiful. Lemons are slow of movement. Dried fruit continues to drag; better conditions are hoped

for and may be experienced later on. Almonds and walnuts are not quoted down, but concessions are necessary to effect sales. Wool is receiving more attention and is more firmly held; buyers are now on the anxious seat. Hops are not offering freely, neither are they eagerly sought after at top figures.

## In the San Joaquin.

We spoke appreciatively last week of progress and development in the Sacramento valley. We are glad to note the fact that the great twin valley of the San Joaquin is also manifesting much life and is proceeding in an organized and co-operative way for the extension of prosperous activity in all industrial lines. The San Joaquin in area, in variety of resources and in recent achievements in development possesses enough and has done enough to constitute it an independent commonwealth, but among the characteristic traits of the San Joaquin are modesty and loyalty and the valley is content to throb and beat unceasingly as the great heart of the State of California. The last few years have brought the San Joaquin, with its immense stretches of fertile land and equally immense supplies of irrigation water, into greater prominence than ever before, and now is the time to impress these facts upon the attention of the public at large.

This work is now being done in several ways. One which at the moment challenges especial attention is the holding of a citrus fair, which will open in Tulare City on November 26th and hold five days. It bids fair to demonstrate in a notable way what can be done by arousing the patriotic and co-operative spirit in a geographical district. The fair is one of the undertakings of the San Joaquin Valley Commercial Association—an organization formed "to advertise to the world the resources of the counties embraced in the Association and to encourage immigration thereto." There are eight counties in the Association, viz., Kern, Tulare, Kings, Fresno, Madera, Merced, Stanislaus and San Joaquin, and it has a full outfit of active officers distributed throughout the valley. Each county is entitled to six delegates at the quarterly and annual meetings of the Association who are elected by the commercial organizations in the respective counties.

The question of holding a citrus fair at some point in the valley was first discussed at the quarterly meeting in Bakersfield on May 19th. It was further considered at the meeting in Modesto on June 9th and finally decided upon at the meeting in Fresno on July 14th. We mention these facts merely to show that the event has been fully prepared for, and that is the secret of success in most events. Whatever is worth doing in the fair, as in other lines, is worth doing well.

But there is another element of strength in the effort, and that is the participation by the Supervisors of Tulare county. This county has on her eastern side a citrus fruit district which has come to have a name all through the country—the Porterville district. The county expresses her interest in the achievements of the Porterville citrus growers by appropriating \$1000 to be used in defraying the expenses of the citrus fair, and appointed a committee of four of the most successful citrus growers to make the expenditure on the part of the county.

Still another element of strength in the combination is found in the fact that the citrus fair is to be held in conjunction with the Twenty-fourth District Agricultural Fair. The directors of this district fair association are men of well-known energy and acumen in agricultural lines and they are fully aware of what their exposition will gain by the acquisition of a creditable citrus fair adjunct.

We have, then, three influential organizations working for the success of this undertaking, putting time and money into its promotion, and there can be no question about the result. We allude to it not alone to add our own part to the end to be desired in a splendid show of produce and a great congregation of people, but to point out the way in which such things should be done. We cannot secure the advancement of California or of any part of it, be it never so good, without getting right down to earnest self-sacrificing work in making its excellence known. The world is too big for people to see across. It is not enough to have a good country and to do well in

it. The outside world must be made aware of the fact by most persistent advertising in all wise ways. To have good products, to show them and to bring knowledge of them to the thousands who cannot see your showing but who can be reached by good pictures and good fruit—these are the modern ways of making a way in the world, and every part of the State which has achieved anything really good should undertake the obligation of proceeding in this manner.

We have a measure of our own to convince us of the present prosperity and activity of the San Joaquin. Our subscription list is increasing rapidly in the valley as in other wide-awake parts of the State. We are glad to testify to these many new friends that we have the fullest interest in their local projects and aspirations and desire to be helpful in them. This applies not alone to individuals but to communities as well. The citrus fair of the last week of this month will bring hundreds through the valley from remote parts and it should collect thousands from all points in the valley. It will not alone fill the valley resident with patriotic pride but it will give him many hints about progressive and profitable things which he himself can do for his own advancement and that of his section. We expect that the affair will be a rousing success in many ways.

The propaganda of the Water and Forest Association is proceeding again after the election recess. Mr. Smythe is working up the Sacramento valley and will not stop until he comes up against Mount Shasta. Nearly fifty meetings have been held thus far from San Diego northward. At the close of these meetings, on or about December 20th, a great convention will be held in San Francisco, at which delegates will be present from all over the State. At that convention the platform of the Association will be elaborated, and the reforms which are proposed to be asked for will be framed into legislative bills and brought before the Legislature this winter. The California Water and Forest Association, starting within a year with less than seventy-five members, numbers to-day 4000 citizens, scattered through 123 towns, cities and villages of the State, and the list is now growing at the rate of 1500 per month. During the past summer \$12,000 has been raised and expended in survey investigations along the streams and watercourses of the State. This money has been expended in connection with an equal amount furnished by the United States government under the Geological and Hydrographic Survey Department. Complete official reports of the work will shortly be mailed to all of the members of the Association, also hydrographic maps of the State of California. The work seems to be going actively on and it promises to be of great value.

NOVEMBER is just the time to talk about taxes. It is very near to every man's pocketbook just at this time. The San Jose Farmers' Club discussed the subject last Saturday. Judge Hulbert gave a history of the taxes of his county, in which he showed how they had been increased. He stated that the country land was assessed in undue proportion and paid an unfair tax as compared with that of other property. Other speakers were Judge Lewis and Mr. Cragin, both of whom discoursed along similar lines. It was stated by the speakers that the country land was assessed at a much higher value than was the property of the city, which, it was claimed, is seldom placed at more than 40% of its real value. It seems too bad that these discussions do not reach the ears of those who can right matters. If some concerted effort were made with the State Board of Equalization something might be accomplished. There is much in it, and public burdens should be equitably distributed.

OWING to the disturbances in China the silk industry is suffering in Germany, Italy, France and Switzerland. A large falling off in the yield is shown as compared with last year, and it is feared that deliveries may be suspended. The prospect is the more serious, as China silk is essentially the material for cheap fabrics.

THE total deciduous fruit shipments overland to the close of last week was 6228 cars. This is about 350 cars behind the total for last season to the corresponding date.



QUERIES AND REPLIES.

Morning Glory.

TO THE EDITOR:—How can "wild morning glory" be killed out on a damp rich soil? I have been cited to an article in the PACIFIC RURAL PRESS, but failed to find it.—N. P. MITCHELL, Fresno.

We have had a good deal on this subject in the past and many claimed cures for this pest have been disproved. The only way we know of to kill morning glory and several other plants of its kind is to smother them in the dark as poor Desdemona was smothered. This is done with a plant by constantly cutting it off beneath the surface of the ground. It will not do to let it come out to the light and then cut it off below the ground; that merely multiplies its shoots. Run through the ground at least once a week a flat toothed cultivator or weed knife; run it just the same if you do not see anything to cut; there will be something cut off below ground and that is just what you want. Keep this up as long as the ground is in condition to work in the winter and start in again in the spring and keep it up. In some soil it dies hard and resists long smothering, but it is widely testified by growers' experience that this treatment will eventually kill the plant. In your region morning glory patches have been sown with alfalfa and turned to use by pasturing. This keeps the morning glory down and probably gets more out of the ground than can be had otherwise.

A Depleting Prescription.

TO THE EDITOR:—Will you prescribe a treatment for soil that seems to be a conductor for wet and cold. They call the soil foothill adobe, a sort of dark brown clay mixed with gravel. It sticks when wet and packs easily. Prune trees grow all to wood and the fruit will not set, and what sets mostly drop off. Tomatoes and peas do likewise?—SUBSCRIBER, Santa Clara county.

It seems as though treatment for a too plethoric condition would best meet the symptoms. If your trees are of proper age to bear let them go unpruned and uncultivated this year, so that the soil will take less water this winter and lose more next summer. If you have been using manure stop it off short. If your land lies at the foot of a slope and gets underflow, cut a drain to relieve it of this for a year. This treatment ought to check excessive wood growth and induce fruiting. Afterwards the trees should bear heavily and then you can let them have more water by cultivation or by seepage. Tomatoes and peas act like pampered trees: while growing too rankly they do not set fruit nor hold well to what they do set.

Wet, but not Swampy.

TO THE EDITOR:—I have some land upon which water stands after a rain, but shortly drains off, leaving the ground damp, but not swampy. I desire to plant prunes in this part of the orchard, and want to know if it will be all right to do so. If not, suggest some other fruit or nut tree.—MIRA MONTE, Sonoma.

A big overflow would not necessarily be of disadvantage; but you must be sure that the water does not stand either on the surface or in the soil for any considerable time. This could be determined by digging a hole 3 or 4 feet deep and watching how the water acts in it. If it stands for several days, the piece ought to be underdrained before planting, and then the myrobolan root should be used for the prunes. Pears will endure more standing water than any other fruit we know of, but they are better without it.

Fall Bloom Not a Disaster.

TO THE EDITOR:—In Nov., 1899, the papers reported that the "Aiken prune orchard was in full bloom in the Santa Cruz mountains owing to unusual heat from forest fires." The fact was that about 100 trees near a lagoon, where the soil was rich and moist, were white with blossoms at that time. The prunes set and when about as large as buckshot during the winter fell off. It may be of interest to your readers to learn that those trees were to all appearances in full bloom on time in the spring and bore large crops of good sized prunes. I was confident there would be plenty of buds in the spring.—W. H. AIKEN, Wrights.

This testimony is interesting and will be comforting to those who find their trees blooming out of season. We have also seen cases of fall blooming which was

followed by seasonal bearing. There are so many bloom buds on some of our trees, especially, perhaps, of plums and cherries, that a great part of them can be well dispensed with, and the freaky precocity frequently opens only such numbers as can be well spared. But this is not always so. Judge Aiken's trees are in a rich soil and in a region of heavy rainfall. The trees were not scant at any time; they might perhaps have been overfed. We believe trees which are in hard lines and bloom out of season often require much time to recover normal condition.

Forage Plants for Tule Lands.

TO THE EDITOR:—I have a tract of land on Roberts island and it is my intention to put it into grass for dairying purposes. It is of peat formation, but has been farmed to barley for a number of years. The water is at a depth of from 3 to 4 feet and can be irrigated, but on account of its loose, porous nature, think it could be only sub-irrigated. I would like to know what kinds of grass are best adapted, whether alfalfa or rye. On a portion of my land I have a half stand of rye grass. Could I plant this in alfalfa, or would the rye grass crowd it out? Which is the best kind of rye grass for my purpose, Australian or Italian? I have heard orchard grass spoken of favorably. What is your advice? Will frost kill alfalfa when it first sprouts?—OWNER, Stockton.

You can probably get a stand or at least a good catch of alfalfa by scratching in the seed with your rye grass. It had better be done in the spring as it is now too late to get the young plants along far enough to stand frost. They are very easily killed by frost when starting. We do not know the rye grass would stand a heavy growth of alfalfa, but it will hold its own if pastured. We believe that red clover will do better than alfalfa where the water is near the surface and where there is danger of overflow from seepage. Orchard grass is worth trying. It will stand much drouth and much water also. We do not know which is the better, English or Italian rye grass: both are well reported, but we are inclined toward the English.

Prunes for Cows.

TO THE EDITOR:—Is there any danger in feeding prunes to cows? They eat them all right; seem to chew up the pits.—F. W. H., Corralitos.

This should be answered from experience, and we have none. Prunes should be a fattening food, and, because of extra sugar contents, a better stock food than other fruits. The value of dried prunes as compared with grains for pig feeding is nearly equal, weight for weight. How the roughage in the form of pits may affect the animal we do not know. If a cow has appendicitis proportionate to her size, the plum pit ought to be a good fit. Who can advise our correspondent?

Root Knots and Top Grafts.

TO THE EDITOR:—Is it advisable to take black knot off young prune trees or not? Also, do apricots grafted on prune trees with almond root make a success?—SUBSCRIBER, Los Gatos.

Remove the knots with a hatchet or chisel and mallet and paint the wound with Bordeaux mixture, or use a paste made of two parts of bluestone, one part of copperas and three parts of lime, crushing and using enough water to form a paste. The use of this usually stops the diseased growth at that point. Apricots do not take kindly to prune stock. There is a lack of affinity which the presence of the almond root below would not affect.

Cleaning Barrels.

TO THE EDITOR:—Will you please tell me through your paper how I can burn out or otherwise clean and purify barrels that have held lard or fish, so they will be suitable to hold olives for pickling.—N. W. CRANE, Simi.

We doubt whether such receptacles can be cleansed sufficiently for such use. We should get new casks. If the old ones are capable of cleaning, soaking with hot lye accompanied with the due amount of scrubbing and rinsing; followed when dry by fumigation with burning sulphur, might do it. Lard or pork barrels would be much more likely to give good results than fish barrels.

Toff's Winter Rhubarb.

TO THE EDITOR:—Will you kindly inform me as to the commercial value of Toff's winter rhubarb? I want to plant extensively either of this or one of the old sorts. If Toff's produces freely and sells readily

in winter it must be the most profitable kind to grow.—NEW SUBSCRIBER, Burnett.

We are sorry we cannot tell about Toff's nor can we find out about it by such inquiry as we have been able to make. It does not appear in such books and catalogues as we have at hand. Can some reader supply the information? The question may arise why worry about Toff's while we have a tiptop new variety for winter growth offered by Mr. Burbank.

The first carload of oranges from Riverside this season was sent to New York Nov. 9th. Present indications point to a larger supply of oranges for the Eastern Christmas trade than has ever been sent from Riverside. The excessive warm weather during the past ten days has been the means of coloring the fruit very much, which alone insures heavy shipments for the holiday trade.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending November 12, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

COAST AND BAY SECTIONS.

The weather has continued warm during the week, becoming cooler toward the close, with light frosts in some places on the 10th. Rain has fallen in the central and northern counties, and there were light showers in some of the southern counties on the 7th. Heavy rain would be beneficial in all sections. Plowing and seeding have progressed slowly. Pasturage is drying up in portions of the southern coast district, but is plentiful in the central and northern portions. Early sown grain is still in good condition in most places. Farmers are plowing more than the usual amount of land, and the acreage sown to grain will probably be much more than the average. Sugar beet harvest is nearly finished.

SACRAMENTO VALLEY.

Rain has fallen in nearly all sections during the week, greatly benefiting vegetation. The temperature has continued somewhat above the normal. Oranges have ripened rapidly, and picking and shipping are in progress. Olive picking continues. There are still a few prunes on the trays, but most of the crop is ready for shipment. Tree pruning has commenced. Pasturage is in good condition, and has been greatly improved by recent rains. Plowing and seeding are progressing, with continued prospects for a large acreage of grain.

SAN JOAQUIN VALLEY.

Warm, dry weather has continued through the most of the week, but with considerable fog and light sprinkles of rain in some sections. Farm work is being somewhat retarded by the lack of moisture in the soil, though some farmers continue plowing and seeding. In the northern section early sown grain is doing well, and grass is making good growth, but in the southern counties the soil is very dry and pasturage is drying up. Oranges and olives are ripening, and good crops are expected. No damaging frosts have been reported.

SOUTHERN CALIFORNIA.

The continued warm, dry weather has not been favorable for agricultural interests, as the unusually high temperature and low humidity have caused rapid evaporation from the soil, and the effect is noticeable in citrus orchards in some localities. Oranges and lemons have colored rapidly under the influence of the bright sunshine, and there is some danger that the fruit may ripen prematurely. The orange crop now being gathered is said to be of excellent quality, and it is expected the yield will be above average. Walnut picking is nearly completed. Apples and berries are plentiful. The water supply is holding out very well.

EUREKA SUMMARY.—Apple picking is practically completed; the crop is greatly above the average and has been placed on the market. Dense fog along the coast nearly all of the week. Little farm work is being done.

LOS ANGELES SUMMARY.—Very warm week, with much drying land winds that parched the ground and verdure badly, and caused a heavy demand for irrigating water. Good weather for oranges; some picking and packing being done.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Nov. 14, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week..... | Total Seasonal Rainfall to Date..... | Total Seasonal Rainfall Year to Same Date..... | Average Seasonal Rainfall to Date..... | Minimum Temperature for the Week..... | Maximum Temperature for the Week..... |
|----------------------|----------------------------------|--------------------------------------|------------------------------------------------|----------------------------------------|---------------------------------------|---------------------------------------|
| Eureka.....          | 1.14                             | 8.25                                 | 8.49                                           | 5.84                                   | 46                                    | 72                                    |
| Red Bluff.....       | .10                              | 3.71                                 | 4.85                                           | 3.42                                   | 44                                    | 82                                    |
| Sacramento.....      | .10                              | 1.78                                 | 5.82                                           | 2.28                                   | 48                                    | 82                                    |
| San Francisco.....   | .17                              | 2.12                                 | 5.44                                           | 2.50                                   | 48                                    | 80                                    |
| Fresno.....          | .46                              | 2.42                                 | 1.19                                           | 46                                     | 84                                    |                                       |
| Independence.....    | .00                              | .82                                  | .79                                            | 1.19                                   | 38                                    | 74                                    |
| San Luis Obispo..... | .1                               | 1.89                                 | 4.43                                           | 2.47                                   | 38                                    | 92                                    |
| Los Angeles.....     | .00                              | .11                                  | 1.77                                           | 1.88                                   | 50                                    | 94                                    |
| San Diego.....       | .00                              | .28                                  | .78                                            | .79                                    | 48                                    | 82                                    |
| Yuma.....            | .00                              | .02                                  | .58                                            | 1.10                                   | 54                                    | 82                                    |



## HORTICULTURE.

### How to Cure Fruit.

By B. FOREMAN of Diamond Springs at the Farmers' Institute at Placerville.

The method I wish to explain is, how to cure your fruit and not cook it until it resembles a lot of Saratoga chips with no shape to it. The market is particular on this point. It wants cured fruit with its original shape when cut and not all cured up as is too often the case at present.

If fruit is large, leave in the sun three or four days, unless very hot, when two or three days will suffice. When fruit is small, such as seedling peaches and pitted plums, one or two days are sufficient, or just as soon as the fruit begins to curl at the edges, while with pears just as soon as you notice they begin to get a little reddish at the edges, which shows they are sunburning.

Pile them up so the air can circulate for two or three days. Then sort each tray, making two or three grades of it according to fruit, double them up by putting four trays on one, leave for another two or three days, which depends on the heat, stirring occasionally with the hands, after which the fruit will be ready to go into the sweat box.

The sweat room should be dark and tight with a good floor, upon which dump all fruit when ready. This fruit on the floor should be shoveled over once or twice a week, so that fresh air can strike it, else some pieces, rather wet when put in, may mould. As the fruit is put in fresh, it ought to be kept separate until it has gone through a sweat, when it can be shoveled onto the first lots and as it cures can be plied deeper and deeper, which will keep it from drying out any more and keep the moths from working in it.

You will see by this the need of a good-sized sweat room so you can have plenty of room to work without crowding, for this process of curing is an all important one and on it depends the difference in estimates of the number of pounds of green fruit required for one pound of cured. To explain further, one man can take five pounds of peaches and make one pound of cured while another man will take eight pounds to make the same amount of cured. By a little figuring one can soon tell the difference it makes in dollars and cents. Bear in mind that fruit put in the sweat room a little wet is easily dried out—too easily in fact, as most of you are aware, while with fruit put in too dry, it is a risky thing to try the wetting process. Keep the natural juice in the fruit and you will have no bother with it.

In marketing dried fruit, as in all other produce, each one has to use his own judgment. Marketing, however, is something that each one knows best himself, at least he thinks that he does. I presume in most cases it is the best way, but above all never sell on a falling market, for it only makes it worse. Wait till it is steady and then decide whether to sell or hold.

### The Fruit Growers' Convention.

The State Board of Horticulture is desirous that exhibits of cured fruits be made at the coming State Fruit Growers' Convention, which will be held in Pioneer Hall, San Francisco, beginning Tuesday, December 4th, and continuing four days. What is wanted particularly is commercial samples, so that the methods of packing for the markets of the world may be illustrated. To this end it is hoped that growers and packers will forward samples of cured fruits of all commercial qualities and sizes, both loose and packed. Taking prunes, for example, the Board would like to have samples of fruit running from 30-40 to 100 in sizes, so that every person attending the convention can see exactly what sizes mean. It is announced that all samples may be forwarded by express at the expense of the convention, and no charge will be made for space or for installing the goods.

The State Board is also desirous of procuring exhibits of models of all kinds of fruit machinery for the convention.

### Citrus Trifoliata.

TO THE EDITOR:—This member of the great citrus family has been imported in such large numbers that its value as a stock on which to bud the best of all oranges, the Navel, should be known to all planters.

The important points known to all are that the stock is deciduous, dwarf, and very hardy. Buds worked on the Citrus trifoliata are evergreen, partake of the dwarf nature of the stock and are very hardy. The hardiness does not refer alone to capacity to withstand cold, but the roots will stand more water and also drouth than any other citrus root at present known.

But the great and most important fact of all has not been mentioned—this is that the fruit from buds worked on this root colors up earlier and is much more palatable than fruit on standard trees. To planters in this northern part of the State the last

fact is of the utmost importance. Southern California has, by reason of light rainfalls for several seasons, been enabled to place early colored Navels and seedlings in the great markets at the same time our fruits are sent out. This naturally divides the cream of the sales.

If northern planters would take advantage of the few days of earliness that fruit from buds on Citrus trifoliata afford they would still be in advance, no matter what condition prevailed in other sections. The above observations have extended over a number of years and apply to the Washington Navel variety only.

FRED C. MILES.

Aloha Nurseries, Penryn.

## FORESTRY.

### Valuable Eucalypts.

By J. W. JOBES at the University Farmers' Institute at Escondido

There is probably no other subject on which so little has been written and to which so little thought has been given as eucalyptus culture, and yet when we think of what has been done to coast country, we scarcely feel justified in giving up a second place on the list. If people will use ordinary observation as they pass through the localities where eucalyptus have been planted along the country roads and about the drives on the different ranches they cannot help but appreciate what the eucalyptus has done. Scarcely any other tree will break the monotony and give relief to a landscape that the eucalyptus will in so short a time, to say nothing of the grateful shade for the traveler and team. Three years from the time of planting the *E. globulus* (common blue gum) ought to be and usually is, from 20 to 30 feet high.

When I came to California in 1886, I saw ranches that had been occupied for ten, fifteen and some as long as twenty-five years with not a tree of any description anywhere to be seen, and if such a thing as tree planting had been suggested, the owner would scoff at the idea of being able to raise any kind of tree in California.

What those men thought of later arrivals who undertook to, and did plant their places, and roads adjoining, to trees, I do not know. But certain it is that many of these early settlers did not improve the opportunities they had—did nothing to redeem California. In the early days Nebraska and Kansas had nothing better than the cottonwood and willow to break the monotony of their broad expanse of prairie, but they used them to good advantage, and we who have something superior in the eucalyptus can do much more if we will only make an effort.

We have in the *E. globulus* the quick growing, and to many people, ungainly tree, with its white blossom and queer shaped pods. The timber is of very poor quality in the young trees, but after ten or twelve years of age it improves in value, but even in the young tree we have a very good fuel. The red and sugar gum are quite similar to the blue gum in growth, but are much more valuable as timber. We can go down the line till we reach the *E. alpina*, which is only a shrub reaching never more than 12 to 15 feet in height.

We can make our selection to meet our needs and grow them accordingly. For beauty we have an eucalyptus as handsome as any one can desire. Take for instance the robusta, ficifolia, calophylla. All have that heavy, leathery, dark, refreshing green foliage. They are not large growing trees, but they make a splendid appearance; and what can be more pleasing than the beautiful, creamy, white robusta or calophylla; the strange, brilliant scarlet of ficifolia or the incomparable pink of the calophylla? I know of no flower more delicate in hue or texture than that of the eucalyptus. Even the bloom of our common blue gum is well worth considering. Take one of the blossoms the first opportunity you have and examine it; satisfy yourself and don't take my word for it.

We have the *E. sideroxylon* with its madder pink blossom, and its timber is stronger than that of hickory—*E. rudis*, with about one-third of its bloom all pink, balance cream white; the *E. California* has a beautiful crimson blossom and is almost constantly in bloom.

The timber of *E. rostrata* is without doubt the most durable of any of the eucalyptus family that thrives with us, being of exceptional value for posts, piles, railroad ties or any similar purpose. Probably *E. robusta* is the best all-round shade tree in the family. It will do well on low, sour, swampy land, where other varieties are almost or quite a failure, and also does splendidly on our high granite hills. It is a symmetrical tree, and bears a profusion of blossoms. We find some variation in different specimens which is quite due to carelessness of seedsmen either in gathering or handling seeds. This is true of all varieties, so please do not blame the propagator for all the mistakes.

Now a few words about eucalyptus as a bee feed producer, and I will close. If we take a few of the varieties that habitually bloom twice a year, we can very easily have feed for our bees most of the year, and certainly through the dry part of summer and fall when it is so difficult for them to procure anything in the way of feed from other sources.

## FRUIT MARKETING.

### American Fruit in China.

H. B. Miller, U. S. Consul at Chungking, China, whose report on the dairy trade is given elsewhere, also reports on American fruit in China, and the points are of much local importance.

CHINESE FRUITS.—Fruits grown here comprise peaches, pears and apples. A few very fine peaches are raised; but the majority are of the Clingstone variety and inferior in quality as compared with the American peaches. The principal enemy to peach growing here is the peach worm that infests the fruit and is similar to the codlin moth in the apple. These worms are not combatted in any way by the growers and are so plentiful that it is almost impossible to find any fruit free from them.

The pears are of several varieties, but are very inferior and universally infested with codlin moth.

APPLES.—All the apples that I have seen in this market are of a small, sweet, tough variety. Those that I have examined show traces of the codlin moth, but are not as badly affected as are the pears. I was surprised to find the apples in many instances covered with the San Jose scale. I do not know how long this pest has been here, and whether it has any natural enemies or not. As they do nothing to combat the scale, if it has been here long, it must have some natural enemies to hold it in check or it would be in greater evidence.

So far, I have not seen any apple scabs or fungus growths on any of the fruit, to the extent of injuring it, and am inclined to think that the climate is too hot for the growth, although the air contains enough moisture to make it thrive.

APPLE IMPORTS.—As to the matter of a market for Oregon apples, there have been several shipments from Washington and more are ordered. There will probably be as many as 1000 boxes imported during this year.

The foreigners consume the imported apples; the Chinese fruit answers all the requirements of the natives. The great cost of apples here materially limits the consumption. They are usually sold at 15 cents Mexican (7½ cents United States) per pound.

Dealers order only in small quantities—from 10 to 100 boxes at a time. These come by steamer either from San Francisco or Vancouver, B. C., and usually reach here in bad condition, caused either by poor packing or careless stowing on board ship.

Apples coming to the Orient should be packed just before shipment in standard boxes, with each apple wrapped in paper and a layer of cardboard between each tier of fruit and on top and bottom of box. There are many varieties that should not be shipped here, such as the Baldwin. The best kinds for this market are Ben Davis, Winesap and Yellow Newtown. There are few varieties that will stand the long ocean trip as well as these.

There will never be a very large market here for such fruits, until some plan is devised to get them in the hands of the consumers at a much less cost than at present. Something might be done to increase the market by introducing the American apple to the tables of the well-to-do Chinese.

PRUNES.—Regarding the market for prunes, I find it equally limited and confined to the foreigners. The natives have a plum that they dry and use to a limited extent, but it does not seem to enter into the food consumption of the great mass of Chinese. The standard of living of the ordinary Chinese is so far below ours in the cost and character of food consumed that it seems impossible to us, and a plain statement of facts appears like the most extravagant exaggeration. As an example, the servants in some of the best places in Shanghai club together and pay a cook to provide and prepare their food for them at a cost of \$2.50 (Mexican) per month, or about \$1.25 per month in gold, or a fraction over 4 cents per day in our money.

These people live much better than the average. I feel safe in saying that the average cost of food consumed by the Chinese does not exceed 2 cents gold per day.

In the interior wages range about as follows per day: Carpenters, masons and blacksmiths, 10 cents; laborers, 8 cents. The cheapest laborers work for \$3.75 (Mexican) or \$1.87½ gold per month, which amounts to 12½ cents per day in gold. It will readily be seen that the masses of China will never consume many prunes at a rate that will net the producer 3 cents gold per pound. A present and future market for American fruit can not be expected among the masses of China. I find the California French prune here, and paid 25 cents (Mexican) per pound for exactly the same grade that I sold from my orchard last year for 3 cents gold. These are bought by dealers here in lots of from five to twenty boxes of twenty-five pounds each.

Unless there is an opportunity to create a market for the Oregon prune in northern China among the Russians, I can see no extensive opening for it in the Orient. California prunes in boxes reach this market in good shape and are very nice.



## THE DAIRY.

## The Financial Standpoint in Dairying.

By JOHN R. DENMAN of Petaluma at the Recent Dairy Convention at Sacramento.

In viewing our industry from the financial standpoint, we find that dairying is essentially a manufacturing business, in which we use the cows as machines for manufacturing milk from the raw product—feed—and, like any other similar business, is subject to certain fixed charges, so to speak, which include the interest on money invested in land, improvements, stock and fixtures and feed enough for the maintenance of our stock.

Outside of these are what correspond to the operating expenses, which would include wages for labor and the feed eaten by the cows, over and above what may be necessary for keeping, and from which we would expect them to return us a profit in the form of a salable product—milk.

It will thus be readily seen that the only way in which a profit can be obtained in our business is by keeping cows that will consume and change into good, rich milk a large quantity of feed. Now, the question is: How are we to know and obtain such animals?

**How to Get Good Cows.**—As to the first proposition, that can be determined by keeping a record of the weight and percentage of butter fat of each cow's milk separately. When this is done for the first time, it is surprising to find how many cows are kept at a loss, and what a difference will be found to exist between cows that were previously supposed to be equally valuable. One will yield a fair amount of rich milk per day for a long period and in the end leave a handsome profit after paying her share of the expenses. The other will make a phenomenal yield of rather poor milk for a short period and then drop down, and the year's work shows a very small profit, or may be a loss.

It is only when we can study the full record, systematically tabulated, that we can come to a judicious determination as to the relative value of our cows—which are the best, the good and the poor. Having classified our cows accordingly, we can then raise the heifer calves from the best, sell the calves from the average, and dispose altogether of the poor cows. And I would class any cow as poor that did not show an annual production of at least 150 pounds of butter fat. This would be for the first year, and after that the standard should be raised each year.

**BUYING AND BREEDING.**—As to the method of obtaining productive cows, if a person has the means it is only a question of buying cows that come up to a certain standard for daily production of butter fat. If, however, circumstances forbid this, then we must breed and raise our good cows.

In this case the first requisite is the best bull of dairy breeding that one can buy. Dairy breeding can but be determined by the dairy tendency of the ancestry—the tendency and ability to transform feed into milk, as shown by the records of dams and grand-dams, and by the same token in the get of grand-sires. At the same time we must study the shape of our best producing cows and have an ideal of the shape of the model dairy cow constantly in mind, and breed for this ideal. Then, by raising the heifer calves from our best cows and sired by such a bull, keeping an accurate record of the performance of each and every cow in our herd, and by promptly disposing of all cows that do not show a profitable account for the feed consumed, one can in a few years build up a herd of fairly profitable cows.

In this connection I will relate some personal experience. When I commenced dairying I had a herd of sixty cows of mixed breeding. I requested a friend to aid me in the selection of a choice registered Jersey bull, that being my preference for a dairy breed. After seeing my herd the friend said: "Now, you have also a number of brood mares of Clyde and Norman breeding. Don't you think it as advisable to breed these mares to a trotting horse for speed as to cross your rather coarse cows with the finely bred Jersey for increased butter production?"

"Well," I said, "the difference is this: As between a horse to trot a mile in six minutes or five minutes, the market value of the increased speed is nothing. But if I can breed cows to make six pounds of butter from the same feed from which I now get five pounds, every ounce of increased production has a cash value." He saw the difference immediately.

By following the plan here outlined I have bred up a herd that increased in average production from 169 pounds per head for the twelve months ending October 1, 1893, to 302 pounds per head for the eleven months ending September 1, 1900.

**IT PAYS.**—The expense of procuring blooded sires, together with the bother of keeping accurate records, might be urged as arguments against these methods, but we must remember that we are engaged in a manufacturing business, and according to the standards of the commercial world, failure would overtake the manufacturer who makes no effort to improve the machinery of his plant to make it equal to the best, but continues using poor wasteful machines; or who turns the raw material into the workroom and takes whatever the operatives turn

out, with no inquiry as the amount each employee individually produces. If we follow a similar course we can only expect similar results.

**FEEDING.**—Let us now consider the feed, the raw material furnished to the cow, which we expect them to profitably transform into milk. After careful analysis the feed has been divided into three principal elements, namely protein, or muscle making; carbohydrates or heat making; and crude fat, which latter is largely interchangeable with the carbohydrates. Exhaustive and careful experiments have established the fact that a cow of average weight requires a day's feed or ration, consisting of from twenty-three to thirty pounds of digestible dry or solid feed after all the water has been expelled by heat; that this dry matter should contain about two and one-quarter pounds of protein, thirteen pounds of carbohydrates and three-fourths pounds pure fat. This combination of different elements is called a balanced ration, because the amount of each balances the rest and the cow is able to use all of them in the making of milk without waste.

The economy of a balanced ration is thus easily seen, and the wastefulness of any other ration can be realized when we consider that a scarcity of one element means that only so much of the rest of the feed as will combine with that can be utilized by the cow, and no matter how much the excess may be, it will only result in a waste, the disposal of which does the cow no good. Where a balanced ration has been adopted after haphazard feeding, an increased product has resulted with decreased expense.

The agricultural college of the State University has made analyses of a large number of kinds of hay and milk products. These analyses carefully tabulated can be obtained for the asking, and show exactly the amounts of the different elements contained in the various feeds. A ration can then be selected to give the proper amount of each class of nutrients.

With us the protein is the most necessary, the most expensive and the least abundant, so the value of a mill feed may be said to vary as does the amount of protein it contains. And this value should determine our selection of feeds in formulating a ration.

A very necessary feature is an abundance of pure water of easy access for the cows. Milk is almost nine-tenths water, so it will be seen that a scarcity of that article or its pollution can only result in loss.

**HANDLING COWS.**—In all these calculations we must not lose sight of the fact that the ability of the cow to profitably change her feed into milk results from an artificial prolongation of the duty of motherhood—namely, the nourishment of her calf; so the milker is, in a way, adopted by the cow in the place of the calf, and the more care and kindness shown the cow the better the results.

We would not think much of the business sense of a manufacturer who, after securing a fine lot of machinery, set it up out of doors, to be roughly handled by any ignorant hand at any time the latter chose. On the contrary, we would expect the machinery to be carefully housed in a good factory and to be carefully handled by fully competent men, having regular working hours. Applying these rules of action to our own business, we should have proper shelter for our stock, men who understand their requirements to handle them, and regular hours for feeding and milking. In this connection, the outcome of a test made at an experiment station is interesting. The herd of cows was divided into two classes and one part milked and fed regularly. The other half had the same feed and care, except that they were milked and fed, to use a current expression, "at any old time," varying an hour each way from the regular milking time. The results showed that the cows of the first class made a slight increase as compared with former production, and the others showed a decrease amounting to about 10% of their former output. In other words, nine cows regularly cared for gave as much milk as ten where this particular was neglected.

**MARKETING.**—Having provided for obtaining profitable cows and feeding and caring for them economically, the dairyman must now study the marketing of his product. He must take a broad view of the situation and follow such a policy as will result in the largest net returns. In these days of concentration of interests and quick communication, the dairyman must take lessons from the successful methods in other lines of business.

If he be engaged in shipping milk for a city supply he should combine with his neighbors in the same occupation to enforce the shipment of a pure article, and to see that the margin taken by the city dealer for distributing his wares be not more than just. If engaged in butter or cheese making, he should remember that we are rapidly approaching the limit of production for the home market and that a congested market and ruinous prices will follow unless export trade can be handled. This means large lots of uniform goods, such as can only be made in factories properly managed. Where these exist they should be encouraged, and where they do not efforts should be made to secure them. The successful and careful dairyman might say: "That does not interest me. I get a cent or two per pound more than my neighbors because I make a better article than they do; whereas if we combine we all get the same." The fact may be that all are getting less than they should because of shipping to a market oversupplied with

goods that can be turned to no other place. If, instead, a large quantity of uniformly high-quality goods were constantly on hand, large shipping orders could be filled and better prices all round would result.

**CONCLUSION.**—In conclusion I would say that as the prime object of business is to make money, we should make our practices in conducting our dairy business conform to this. Study is the key to success; study of the records of our cows, to select the most profitable ones and reject the failures; study of methods as to the best care of cows; study as to the cheapest possible balanced ration from the feeds at hand; study as to the best methods of marketing our products.

Let us remember the maxim: "By the mistakes of others, wise men learn to correct their own." Be like the wise man, study the experience of others in our business and avoid their mistakes. When the experience of others are not to be had, study our own, to correct past blindness and avoid them in the future. On the sea of business enterprise let us not pull blindly on, trusting to favorable winds and currents to keep us off the rocks of failure; but, rather, study our charts, lay our course and pull straight for the port of success.

## Butter in China.

In view of the constant interest which Californians take in the possibility of export trade in dairy products in the Orient, the following account by Consul H. B. Miller at Chungking, China, is of much moment. We receive it from the State Department at Washington under date of November 1st.

**THE IMPORTS.**—Butter and cheese were imported into Shanghai during the year 1900 from France, Denmark, Australia, Sweden and the United States to the value of over \$100,000, much the greater part of this being butter. Butter is shipped in tubs, in tins of one-half pound, one pound and two pounds and in the common quart fruit jars holding two pounds. Some of the best butter in this market comes in fruit jars from California. This retails at \$1.75 Mexican (87½ cents United States) per jar, is the highest priced butter sold here, and on that account is not extensively used. The weight of jar and necessary packing makes the freight much greater than on butter in tins. Tins are preferred. Large orders are being placed now for Australian butter that retails at 60 cents Mexican (30 cents United States) per pound in one and two pound tins. There is no import duty on butter here.

**OUR BUTTER IN TINS.**—There is a general complaint against United States butter in tins, which I am inclined to believe is due to lack of knowledge on the part of packers of the proper method of putting up the butter. The principal complaint made by dealers here is that there is usually a deterioration in the quality after a few shipments. The French butter is a remarkable example of this. At one time this was preferred to any, and it was practically in control of the market. It was so popular, and the demand for it so great, that the temptation to adulterate it was sufficient to cause the makers to turn everything possible into butter, and I have just been informed by a very prominent dealer that, because of the adulteration, he has discontinued entirely the handling of French butter.

A good brand of butter that is once established and maintains its quality can count upon a permanent and increasing trade. It is necessary to have the tins stained to prevent rust, and brands should be stamped on the tins instead of being pasted on with paper. It is of great importance to have the package as neat as possible and in such form as will retain not only the good quality of the contents through all conditions of climate, and especially very warm weather, but its neat appearance as well. It must especially be preserved against rust.

The Australian butter in tins is very neatly branded in colored inks on the top of the can. The can is provided with a rolling opener, so that the top can be lifted and replaced tightly, all of which is necessary.

**PICKLED ROLL.**—Butter in rolls or two-pound blocks is shipped to this market in brine during the months of November, December, January, February and March, and can be satisfactorily handled in this shape during these months. Mistakes and failures have been made by sending butter in this form at other seasons, either earlier or later, when the weather is too warm. The importation of butter and cheese into this port was:

|            |           |
|------------|-----------|
| 1897 ..... | \$ 64,800 |
| 1898 ..... | 80,500    |
| 1899 ..... | 104,390   |

**OTHER POINTS.**—The demand for good butter in the Philippines, in Japan and along the entire coast of China is increasing very fast and is bound to assume immense proportions; and with the ability of the Pacific coast States to produce excellent butter at reasonable cost and under favorable conditions, it only remains for the creameries and dealers to master the proper method of packing and handling to secure this trade. With this growing market, more convenient to our Pacific coast than to any other butter-



producing country, with the many lines of steamers coming here from that coast, it seems a matter of importance to our Western States to secure this trade. I would also call attention to the increasing importation of condensed milk and cream at this port. During last year there was imported here from various countries \$55,000 worth of canned milk and cream. I can see no reason why our Western States should not secure a large part of this trade also. In 1897 the importation amounted to \$34,560; in 1899, \$54,750. There has been no doubt an equally great increase at other ports of the Orient.

**BOGUS BUTTER.**—The most difficult problem in securing and holding the Oriental market for pure dairy products is the competition of various forms of so-called butter. The manufacturers of these spurious articles are free to make all manner of adulterations and put them on the market labeled pure dairy butter. I attribute the low price of butter here now to this competition, and firmly believe, from my own experience, that the greater proportion of butter sold is a spurious product, although it is handsomely put up and branded as pure dairy butter. None of the large dealers has the product sold as butter, tested by a chemist, and they are not certain of its purity.

## THE POULTRY YARD.

### Diseases of the Digestive Organs.

A group of diseases of these organs causes great losses of poultry and is but little understood. In the publication of the Delaware Experiment Station, from which we quoted last week, we find the following interesting account by F. D. Chester of the staff of that station.

**PIP OR CATARRHAL STOMATITIS.**—Any inflammation of the mucous membrane of the mouth which causes the formation over the latter of a whitish coating may be termed catarrhal stomatitis. This inflammation may extend to the tongue on which a whitish deposit accumulates, especially along the edge and under side, which when it becomes dry and hard either stiffens that organ or glues it to the adjacent parts of the mouth. Do not endeavor to forcibly remove the hard crust upon the tongue. Moisten the latter with a mixture of equal parts of glycerine and water for a number of times until sufficiently soft to be removed without bleeding. Then paint the affected parts with a solution of chlorate of potash, 20 grains to the ounce, until the trouble disappears.

A similar whitish deposit in patches, called thrush, sometimes forms on the mucous membrane of the mouth. Although caused by a specific fungus, and differing from other forms of stomatitis, its effects are similar. The whitish areas should be painted with a solution of boracic acid, 15 grains to the ounce.

**DISEASES OF THE CROP.**—The crop may become subject to two distinct troubles, (a) inflammation or catarrh, and (b) immobility, in which this organ failing to expel its contents into the stomach, becomes distended and obstructed with food. In catarrh the crop is distended, but soft, owing to liquid gas and fermenting food. Sometimes there are signs of nausea and vomiting. Suspend the bird head downward and by pressure upon the crop the offensive fermenting contents of the latter may be expelled through the mouth. In this manner the crop should be emptied. After which administer 2 grains of subnitrate of bismuth and one grain of bicarbonate of soda in a teaspoonful of water. Keep the bird without food for 24 hours and then feed only sparingly soft and easily digestible food. Repeat the treatment if necessary.

In impacted crop, Salmon recommends the following: "Pour a small quantity of sweet oil into the mouth and cause the bird to swallow it. Then manipulate that portion of the crop nearest the throat by careful pressure and squeezing between the thumb and finger, in such a manner as to break up the contents of the crop and force it towards the mouth in small portions. Suspend the bird downwards from time to time and press the loosened particles of food towards the head so that they will escape from the mouth. With care and patience the crop may be entirely emptied in this way, if oil is administered as often as is required to soften the contents. After this is accomplished, give two grains of bicarbonate of soda, keep without food for a day and then feed sparingly on soft diet until recovery is complete.

**INFLAMMATIONS OF THE INTESTINES.**—Poultry is subject to a variety of inflammatory conditions of the intestines, due to a variety of causes. These have all been given the convenient and popular name of cholera. The most prominent symptom is diarrhoea, more or less elevation of temperature, perhaps followed by subnormal temperature previous to death. The stools are soft, yellowish to greenish, and often bloody, and the evacuations frequent, accompanied by straining. There is more or less intense thirst, but general loss of appetite. There are general signs of illness. The feathers are roughened or erect. The birds generally remain listless with the head drawn in and ached, giving the fowl in

its crouched position a generally rounded outline. The three principal forms of intestinal trouble in fowls are simple, non-infectious gastro-enteritis, bacterial enteritis and fowl cholera. Their differentiation is a matter which the pathologist or bacteriologist must determine, as the naked eye characters of these diseases are not sufficiently distinct.

Simple non-infectious gastro-enteritis is caused by overfeeding, or the ingestion of decomposing food in which poisons have been generated, or in fact by any substance which acts as an irritant to the digestive organs. The disease may be cured by judicious treatment.

A teaspoonful of castor oil to serve as a laxative and carry off the irritating substances should be given. Follow this with 1 grain of bicarbonate of soda and 2 grains of subnitrate of bismuth, in a little water three times a day. If the diarrhoea is very severe and the stools bloody, give  $\frac{1}{2}$  grain of powdered opium with 2 grains of subnitrate of bismuth every 4 hours. Feed only soft cooked food, to which meat scrap is added.

**BACTERIAL ENTERITIS AND FOWL CHOLERA.**—These diseases are caused by several distinct species of bacteria. They have been carefully studied in Europe by a number of authors, but in this country the several forms of bacterial enteritis have received but little attention. With our present imperfect knowledge, the best that can be done is to class them together under the indefinite title of fowl cholera. Suffice it to say that some form of bacterium is the infective agent; that the germ is found in the faecal discharges of the sick birds, and that, by means of these, the disease is carried to the healthy stock. The strictest hygienic measures are therefore necessary to limit its spread in an infected flock. All dead birds should be immediately burned or buried. The sick should be isolated. The poultry house should be sprayed with a 2% chloride of lime solution, wetting everything thoroughly. Drinking cups and feed boxes should be scalded. The yards should be scraped clean of all manure and litter, and then heavily dusted with powdered unslaked lime, or sprayed with a freshly made lime wash just thin enough to pass the nozzle.

Treatment may or may not have value. In the typical and fatal fowl cholera as known in Europe, in which the organism invades the blood and organs as well as produces a local intestinal irritation, medicinal applications have little value. In other forms of intestinal trouble which the layman is unlikely to be able to differentiate from true cholera, treatment has been recommended by Salmon. To arrest the diarrhoea, administer 3 times daily, subnitrate of bismuth 3 grains, bicarbonate of soda 1 grain, powdered cinchona bark 2 grains; mix and make into pills with flour. After the diarrhoea is arrested, Megnin recommends as a tonic powdered fennel, anise, coriander and cinchona, of each 30 grains; powdered gentian and ginger, of each 1 drachm; powdered sulphate of iron 15 grains, mixed and given with the feed so that each fowl receives 2 to 4 grains daily. Feed sparingly with boiled corn meal mush until the birds show a marked improvement.

**ASTHENIA OR GOING LIGHT.**—This disease is quite similar to bacterial enteritis in its effects upon the intestines, but quite distinct in its manifestations or symptoms. Asthenia is a slow chronic disease, of two or three months duration before it kills, while the other forms of bacterial enteritis are as a rule of an acute nature and cause rapid death. In certain cases, however, these distinctions do not hold. The writer has found that in young chickens asthenia may run a rapid course, simulating acute bacterial enteritis. Again, the latter, as well as cholera, may sometimes run a chronic course, so that there are no rules that have no exceptions, especially in pathology.

In its typical form asthenia may be defined as a chronic inflammation of the upper portion of the intestinal tract or duodenum. Inasmuch as practically all of the digestion of the food of a fowl takes place in the intestines, any long continued inflammation of these parts must lead to malnutrition. This shows itself in a gradual loss of weight, hence the term going-light. Birds that have died of this disease are wasted to skin and bone.

If such birds be examined, no marked changes in the organs are noted, but when the upper portion of the intestines are opened, the mucous coating of the latter will be found to be intensely reddened, and covered with a creamy material made up of pus cells, debris and bacteria.

Dawson has shown that these latter bacteria are in all probability the causative agents of the disease, although he was unable with pure cultures of the latter to produce the disease in healthy birds. During the past year the present writer has studied what is probably the same organism, and has succeeded by feeding cultures of the latter to young chickens in reproducing the disease, although attempts to cause the disease in old pullets were unsuccessful. There is therefore reason to believe that the organism in question is the cause of the disease of asthenia, and that it is conveyed by means of the faecal discharges.

The symptoms in asthenia are not marked. There are no signs of acute illness as in bacterial enteritis

or cholera, and there is no diarrhoea; on the other hand, there may be slight constipation. The appetite is voracious, notwithstanding which the birds grow progressively thinner, ending in increasing weakness and death. The control of the disease is within reach if it be kept in mind that the same is infectious, and that sick chickens are a menace to the healthy ones. The same hygienic measures should be followed as already laid down for bacterial enteritis and cholera. The treatment should be the same as that given in the previous paragraph.

## MISCELLANEOUS.

CALIFORNIA has in recent years produced 392 tons asbestos, valued at \$21,400. The industry is not in present active condition.

A 20-INCH cast iron water main subject to a pressure of 150 pounds per square inch should have a thickness of .9757 inch; a 40-inch pipe in the same conditions should be 1.6313 inches thick.

SMOKE from charcoal pits is susceptible of economic saving. Each cord of wood contains 28,000 cubic feet of smoke—2,800,000 cubic feet smoke produces 12,000 pounds acetate of lime, 200 gallons, 25 pounds tar.

IF TWO MEN on opposite sides of the earth looked along two parallel lines when the sun was midway between the lines, both would see the sun in the same place, but it would be rising to the one and setting to the other.

MARCONI is understood to have established perfect independent wireless telegraphy from Poole, England, to St. Catharine's, Isle of Wight, a distance of 30 miles, by means of a pair of metal cylinders elevated 27 feet above the ground at each station.

A VARIETY of antidotes are proposed in the case of swallowing corrosive sublimate. The best, in every way, is considered to be the immediate swallowing of the white of eggs. The white of one egg will neutralize four grains corrosive sublimate in the human stomach.

ANY speed is "dangerous" if the vehicle can not be stopped in a short space. An engine going 5 miles an hour is as dangerous as if it were going 50 miles an hour if the object is so near that the engine or vehicle can not be checked in speed. The question of speed is really one of brakes.

A FLYING MACHINE is considered feasible, and one capable of sustained flight will undoubtedly be produced. Probably the greatest (and, perhaps, unsurpassable) difficulty will, however, be met with in the matter of alighting. Safely reaching the ground after prolonged flight will be the hardest part of the problem to solve.

TO DRILL a hole in case-hardened iron or steel, heat the steel or iron to a red heat, and while it is in the fire drop a lump of sulphur on it just where the hole is to be drilled. Take it out of the fire and let it cool off itself. After the hole is drilled put it back into the fire, heat to a red heat, sprinkle sal-ammoniac over it and plunge in water to harden.

"THE California Dustless Roads Co. of Los Angeles" contracts to sprinkle with oil and keep in repair roads in southern California. They have oiled 32 miles of roads in Kern county, Cal.; cost per mile, \$250. There is about 40% asphaltum in the oil. The effect on the roads is somewhat similar to that when paved with asphalt, becoming smooth and bearing heavy travel.

THEORETICALLY, a cord of dry oak wood is figured to have a value of 40,425,000 British thermal units; one ton—2000 pounds—good coal, 29,400,000 units; one barrel—42 gallons—crude oil, 6,150,000 units. On this basis, 4.78 barrels oil would equal one ton of coal, and 6.58 barrels oil equal one cord dry oak wood. In practice the relative proportions and values differ from these figures.

A GOOD steam motor or "automobile" should be had for about \$600; one in which gasoline furnishes the power, \$1000; an electromobile, \$1500. A gasoline automobile in some respects is preferable, and gives more power from a definite quantity of fuel than either of the other types. Automobiles are in use in San Francisco capable of going from that city to Los Angeles—600 miles.

WOOD, like gaseous coal, distills off volatile or tarry matter, often sticky, and brown in color, and combustible, if sufficiently high temperature is reached. These do not constitute a true "smoke." In the engineering use of the word "smoke" it is to be understood that where the carbon particle does not burn to gas while hot enough to unite with oxygen, it cools to black carbon, lampblack, or soot, and a current of gas carrying such solid black particles in it is called "smoke."

TELEGRAPH POLES can be prevented from rotting in the ground by surrounding the portion of the pole in the ground with an earthenware pipe, similar to a small drain pipe, the end of the pipe coming just above the surrounding soil. Into the space between the pole and the pipe is placed a mixture of sand and resin. The resin is melted and poured into the pipe in that condition. When it solidifies the sand and resin form a watertight preventive against the butt of the pole rotting.

TO CLEAN rusted tools and instruments of steel, if the rust is heavy, stand the tools in coal oil for a few hours, but if only slightly rusted this is not necessary. Next dip the articles in liquor potassa for a few moments and then put them into a strong solution of potassium cyanide. Remove; clean with a paste of the cyanide, castile soap, chalk and water; rinse, and place in a saturated solution of chlorido of tin and leave over night. In this manner every particle of rust is removed and the articles will come out clear and of a silvery whiteness.



## Agricultural Review.

### ALAMEDA.

**MODERN POULTRY RANCH.**—Haywards Journal, Nov. 10: G. Toyne has just completed the fitting up of a modern poultry ranch, at the cost of \$1000, for L. M. Clement of Castro Valley, consisting of a large brooding house 112 feet long, fitted up with movable partitions and individual hot water brooders; also a number of individual houses and yards which can be moved quickly to any part of the ranch by one person. These houses are valuable for the rearing of fine breed poultry. Mr. Toyne also erected a number of colony runs, with an improved house designed by Mr. Clement, which is a great improvement over the old style house, as they can be taken apart, removed and rebuilt without any tools.

### BUTTE.

**TREES GOING TO FRANCE.**—Red Bluff People's Cause: It is a singular fact that recently an order was received at Oroville for orange and lemon trees to be sent to France. The order came as a result of the California fruit display at the Paris Exposition. It appears from the Register that the trees are to be planted on the estate of M. Marinoni.

### COLUSA.

**ENGLISH WALNUTS ON BLACK STOCK.**—Colusa Sun: M. L. Rice has a tree in his yard that is the English walnut grafted on the black walnut. It was put in five years ago this fall, and consequently has four years of growth. It covers the original stock squarely over and, except for the difference in the bark, one could hardly tell where it was joined on. Of course, it is larger just where it joins, and it is 11 inches there, 10 inches a foot below and 8 inches a foot above. It produced a full crop of walnuts this last year and they were all sound. The English walnut on its own stock does not do well. The bark sunburns and the nuts are, many of them, unsound; but in the black walnut stock they do well almost everywhere in the valley.

**ALMONDS PAY.**—Colusa Herald: A. M. Newland, who resides in the Newland district, has sold his crop of almonds, consisting of 535 sacks and amounting to twenty-five tons, to the Johnson-Loeko Co. at their packing house in Colusa, for an average price of \$250 per ton. This would make \$6250 for the crop.

### FRESNO.

**NEW USE FOR EUCALYPTUS.**—Fresno Democrat: The eucalyptus has made its way throughout the State on its merits, and if it has not warranted all the expectations regarding it as a specific in malarious districts, it has at least proved of immense use in a variety of ways. For many years experiments have been carried on at Santa Barbara with the eucalyptus for piling. It is now proved that the blue gum makes in every way the best pile for our coast. It is better and more resistant to the teredo and limnæidæ than even a creosoted spruce pile from Oregon. The eucalyptus piles are now sold in Santa Barbara for from \$5 to \$10 a pile. A first-class pile will be 50 feet in the clear. This brings the maximum price. The endurance of the pile varies with the condition of the sap flow when it is cut. An acre of eucalyptus in a favorable location can produce at least 1000 first-class piles. Cutting this estimate in two, there is still a return of \$500 to the acre. In view of these facts, it is astonishing to hear that fine eucalyptus for piling are still being cut for firewood. A good eucalyptus grove would thus appear to have a promising financial future.

**ALMONDS AND GRAPES.**—Sanger Herald, Nov. 10: One hundred and sixty pounds of softshell almonds from a young tree is reported by Thos. Yost of Centerville. He sold the nuts on the tree for \$10. Mrs. Yost says that from a Muscat vine which has been trained to cover an arbor 6x6 feet in dimensions at his place, he has gathered forty-six pounds of grapes during the past few weeks.

### LOS ANGELES.

**BUSINESS MEN AS FRUIT GROWERS.**—Pomona Times: Two years ago we had the pleasure of an inspection of Geo. A. Steffa's two orchards on East Holt and again last week. He has about twenty acres of oranges, and we doubt if there is a more thrifty, heavily laden lot of trees in the valley, and with fruit of uniform size, of say about 124 to the box. Unless something unexpected happens, he will gather a full crop of sizable, desirable fruit. Hardly a day passes that he does not inspect his trees; and if any are not doing well, the reason is sought and the remedy applied. Not a detail is overlooked. Just now he is having his trees propped up, which is being done by a center stake with cords to the branches on

all sides. This method has been found much better than props for each branch. Last year's crop cost for labor, water, fertilizer, picking and taxes on the property just about \$1600, and he received nearly \$4200 for the crop. Of course, the cost of land and years of time and expense in bringing these orchards to their present condition must be considered in estimating profits, but Mr. Steffa is quite well satisfied with his experience. There is a difference of opinion as to the kind of fertilizers to be used to insure best results; but, with very slight exceptions, Mr. Steffa has used barnyard manure.

**ENLARGING FRUIT CANNERY.**—Pomona Times, Nov. 7: The increasing business of the Pomona cannery requires the addition of more room and of new machinery. An addition of over 4000 square feet of floor space is now being constructed for next year's convenience. The new storeroom will accommodate 500,000 cans. The new cook room will be supplied with new boiler plate cooking tanks, steam hoist and many other improvements of an up-to-date cannery.

**HOT WEATHER AND MOISTURE.**—Pomotropic, Nov. 8: In a recent conversation with a prominent grower of Azusa reference was made to the past week of unusually hot weather for this season of the year. The gentleman stated that the moisture had been drawn from the ground to a greater extent during the period mentioned than during the whole month of October. It is a fact that has doubtless been noticed by citrus growers and will undoubtedly receive their immediate attention. An irrigation now will doubtless produce a larger percentage of "fancys" than if it is omitted.

### ORANGE.

**THE HAY OUTLOOK.**—Santa Ana Blade, Nov. 8: Local prices on hay are holding up well, with a tendency to still further advancement. The price at present is \$12 for good barley hay, which is being retailed out at from \$13 to \$14. There is very little good quality hay now held by the farmers, but there is quite a quantity of second grade still for sale; and this, while not acceptable at present, will doubtless command a price before the new crop offers. Local dealers, with the exception of one firm, are carrying only small stocks, but no uneasiness seems to be felt for the future, as the predictions of the weather-wise point to a favorable farming season; and if the promise proves true, there will be enough hay to tide over to the next crop. Loose alfalfa hay is selling from \$7.50 in the field and \$1 a ton more delivered. The supply of this kind of hay seems plentiful, and the difference between the price for it and the other is causing a large use of the alfalfa.

**A FREAK PEAR TREE.**—Orange Post: Bent. Morrow of Villa Park has what may be termed a freak pear tree. The pears grew in pairs, the second forming on the stem of the first, leaving a space of about 1½ inches between, the stem of the first coming directly out of the blossom end of the second. The fruit is of the Bartlett variety. The tree bears only fruit of this nature, and it is small and worthless. There are about 200 of these freaks on the tree.

**NUT AND FRUIT SHIPMENTS.**—Los Angeles Times: Nineteen carloads of walnuts have been shipped from Fullerton to Eastern points thus far this season. Six carloads of walnuts and one of lemons, netting the growers over \$12,000, were shipped in one day. The new crop of citrus fruit at this point is estimated at 700 carloads.

### SAN BERNARDINO.

**LARGE LAND DEAL.**—San Bernardino Times-Index, Nov. 9: Thos. A. Webb has purchased from Frank B. and Kate Hathaway a section of the Orange Land & Water Co.'s property at Colton. The consideration was \$22,500.

**PEANUTS A SUCCESS.**—Chino Champion, Nov. 2: Bert Robertson gathered a wonderfully fine crop of peanuts from a few plants last week. The plants were loaded with large, fine nuts, showing that our soil is well adapted to their growth. Martin Karcher and others previously made quite a success of peanut growing here.

**MONEY IN CITRUS FRUITS.**—San Bernardino Sun, Nov. 8: Mr. Sparks, of the west end of this county, sold his oranges from ten acres for \$6500, the purchaser to take them from the trees. Mr. Snow from the same section sold his lemons for \$8000 from his ten-acre orchard. All of which shows that there is money in citrus fruits.

### SAN JOAQUIN.

**BROOM CORN CROP.**—Lodi Sentinel, Nov. 10: The broom corn crop which Arthur Thornton, the well-known New Hope farmer, experimented with this season proved a success in some particulars, while in others it did not come up to ex-

pectations. The corn must be harvested with great care and by experienced help, something that could not be secured this year, and it is believed that it would have proved most profitable had it been cut and cured properly, as the market price was very good. Some of the corn raised by Mr. Thornton brought as high as \$100 a ton. He shipped one lot of forty-seven tons. The rich soil on his ranch produced a splendid growth of corn, and it was very heavy, but the manner in which it was cut and cured caused considerable of it to be lost, while some of that saved was not up to the standard and did not bring as much as it should. Mr. Thornton carefully watched the yield, the mistakes made in curing, and should he decide to plant another crop of broom corn he will make an effort to increase the returns. Japs were used to harvest the crop, but white men superintended the work.

### SAN MATEO.

**PRICE ASKED FOR BIG BASIN, \$232,000.**—San Jose Herald, Nov. 10: The forest enthusiasts who are laboring to save the Big Basin redwoods as a public park have taken their first action by securing from the company holding the most valuable part of the tract, and at present cutting it for timber, the offer of terms of sale. The agreement is practically an option on the land. The company offers its 2320 acres for sale at \$100 an acre and agrees to hold it until Dec. 1st of this year. By that time the forest enthusiasts must pay \$25,000 to hold the property. The balance of the \$232,000 asked must be paid by June 1, 1901. If either payment is not forthcoming, the whole tract will be let out to contractors for immediate cutting. The forest enthusiasts hope to interest the people sufficiently to raise the first payment in the required time, hoping for legislative action or further popular subscription to meet the second payment.

### SAN LUIS OBISPO.

**PASO ROBLES FLOUR FOR CHINA.**—Paso Robles Leader: The Banner Flouring Mill is now filling the largest order for flour ever sent out of Paso Robles. The order is for 13,533 quarter sacks, or fourteen carloads. The flour goes to Hongkong, China. The mill has been running night and day for some time to fill this and other orders.

### SANTA BARBARA.

**INCREASING BEET ACREAGE.**—Lompoc Record, Nov. 10: Judge Roberts of Goleta has secured 250 acres of land on the Rincon rancho which he will put in beets after the rains. The Goleta valley gives promise some day of being a vast beet country.

### SANTA CLARA.

**CATTLE INSTEAD OF BEETS.**—Gilroy Gazette: Five thousand cattle will soon be brought to the Tesquisquita ranch, the decision having been reached by the Spreckels Co. that the larger portion of the place is better adapted for stock raising and dairying than for beet growing. A large force of workmen are now engaged in building a spacious silo to accommodate the cattle.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian, Nov. 8: G. W. Sill sent out seven cars of Newtowns last Saturday, bound for England. There is a heavy tonnage of windfall apples in the orchards of this valley. Those apples are dangerous; they are convenient retreats for pests, and orchard preservation will be made easier if they are destroyed. The codlin moth should be given little chance to find winter quarters. J. P. Coward has sold his bearing orchard of thirty-four acres in Railroad district to Mrs. Geo. W. Rowe. This is one of the "show" orchards of Pajaro valley. It is weedless and bugless, and it has borne heavily. It is one of the best orchards in the country, and Eastern apple orchard experts say that they have never seen one which was more attractive.

### SOLANO.

**PRUNING PRUNE TREES.**—Correspondence Dixon Tribune: Our prune men are awakening to the fact that they are growing too much wood on their trees, and, consequently, too many prunes. It is said that in Santa Clara county the orchardists are already commencing to prune their trees, and with prune trees there is more severe pruning than ever before. A large, healthy tree will be cut down to five main limbs, with the lateral branches correspondingly thin. The object is not to thin out the tree altogether, but to so arrange the limbs that there will be a free circulation of air through the tree, and at the same time prevent the tree from sunburn. In order to have fruit, the same general law must be observed with a prune tree as with any other kind of tree—the fruit must be thinned. It would be out of the question to thin a large prune crop, so the next best step is resorted to—the thinning of the limbs.

This is more easily done and will last a season or two, while at the same time there is some chance of having large, merchantable fruit.

### SONOMA.

**BIG WINE SALE.**—Sonoma Index-Tribune: J. Chauvet has sold the entire product of his Glen Ellen and Santa Rosa wineries to the Wine Makers' Association. Two hundred and fifty thousand gallons of red and white wines will change hands by the transaction. A fair price was secured, but Mr. Chauvet would not state the exact amount he received for his big vintage. The sum realized is understood to be in the neighborhood of \$50,000.

**GOOD MONEY IN CHICKENS.**—The following figures are furnished to the Petaluma Board of Trade by Martin Bundeson, a Petaluma poultryman. They are taken from his expense and receipt books, kept solely for his private benefit. Mr. Bundeson is an up-to-date chicken man. His success and experience are about the same as that of many other chicken men. He is a little averse to making his experience public, and says that it takes careful work and lots of it to make chickens pay. Mr. Bundeson owns a 40-acre ranch 4 miles west of town. He uses the entire ranch for chicken runs, but claims that twenty acres is sufficient for the number of chickens he keeps. He values his property at \$8000, which is something a little under \$200 an acre, including extensive improvements. He figures that his poultry buildings, fences, etc., represent \$2000 of this sum. Mr. Bundeson keeps 2400 hens. He has five brooding houses and four incubators. His brooders will accommodate 2400 chicks. In hatching from 2100 eggs he secured but 750 chicks, and again from 500 eggs he has secured 350 chicks. It takes two men to do the work on the ranch. In 1899 Mr. Bundeson sold 473 cases of eggs for \$3700. He sold \$430 worth of old hens and broilers. For feed he paid \$1920 and his help cost \$300. He buys every bit of his feed, save the green stuff of a small garden. He figures the loss by disease, etc., of grown stock as one in five. From these figures he extracts a profit of \$2000.

### STANISLAUS.

**NEW CREAMERY.**—Modesto Herald, Nov. 8: The twelve lots heretofore referred to as the selected site for the Modesto creamery have been acquired at a cost of \$500, and a contract has been let for concrete foundation and floor. Excavation is in progress. The creamery will be in running order the first of the year or thereabouts. Local builders are figuring on the building and San Francisco and Eastern manufacturers on the plant.

### TULARE.

**ORANGES GIVING SATISFACTION.**—Porterville Enterprise, Nov. 9: A. Gregory shipped 100 boxes of the Witt oranges of South Tule to Honolulu Monday. He is also in receipt of a letter from San Francisco, stating that the car of oranges shipped last week from Globe gave entire satisfaction, and more of the same sort were immediately wanted.

### VENTURA.

**VENTURA COUNTY SHIPMENTS.**—Ventura Independent, Nov. 8: Large quantities of Ventura county products are being shipped to San Francisco by steamer. During October there were forwarded 5595 bags of Lima beans, 935 bags of dried apricots, 157 bags of black-eye beans, 194 boxes of oranges, 164 boxes of lemons, 89 bags of walnuts, 78 bundles of green hides, and 60 bags of almonds. Oil shipments were also large. The barge Santa Paula, in tow of the tug Rescue, made four trips, taking 32,000 barrels of oil, while the George Loomis made two trips, taking 12,000 barrels of oil, a total of 45,000 barrels.

### ARIZONA.

**CHOICE DATES.**—Los Angeles Times: Bushels of dates! Yes, and fine fruit. They were raised at Hanlon's, a few miles below Yuma. The fruit is as large as prunes, and each bunch contains the drupes in masses as large as a half-bushel measure. The flavor of these dates is very fine.

## Horse Owners! Use GOMBAULT'S



## Caustic Balsam

A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland O.



## THE HOME CIRCLE.

In Calico.

They've sung the song of the girl in pink  
And the song of the girl in white,  
But the singers are few who have praised  
the true

Goddess of love and light;  
The household fairy whom we all know,  
And knowing her love for the better so—  
The girl in the garment of calico,  
Dainty and sweet and bright.

The bloom of her cheeks, the light in her eyes,  
Is her beauty and title of health;

And day after day, in a modest way,  
Her neatness is better than wealth.  
Old-fashioned? Yes, and we wish her so,  
For just like her mother in calico,  
With the gentle traits of the years ago,  
She's taken our hearts by stealth.

So in a nocturnal of roses I pledge  
Our dear girls in pink and white;  
To their eyes and their hair and their ways  
debonair

I offer my homage to-night;  
Not deep in my heart I feel and know  
A loftier feeling continues to grow  
For the girl in the wrapper of calico,  
Dainty and sweet and bright.

—New York Sun.

## The Matter of a Kiss.

"Sir," said General Green, "you forget yourself, in my opinion."

Admiral Brown bowed. "I am obliged to you for your opinion," he said, with a merry twinkle in his eyes. "I do endeavor, to the best of my poor ability, to be unselfish. Now, in your branch of the service—"

"I wish you good day, sir," exclaimed the general, with fresh flame about the eyes, as he snatched up the hat he believed to be his.

"The same to you, and a healthful constitutional into the bargain," said the admiral in his most urbane manner.

"It will be none the less healthful, as you call it, and none the less pleasurable, either, that I take it alone, sir."

"I agree with you. When one has one's rag out, as the saying is—"

General Green stamped hard on the Turkey carpet, and immediately afterward let loose an expressive monosyllable.

"Quite so. When one has the gout one should be careful. Now if you will do me the honor to take my advice—"

Admiral Brown's smile was like gunpowder on the fire of the general's wrath. "Confound it, sir!" he cried. A waiter rushed into the smoking room, which these two had to themselves.

"Beg pardon, gentlemen; did you call?" he asked, with a look of surprise. The attitude of the old friends was for once not at all friendly.

"Bring some ice," said the admiral. "Certainly, sir."

The general limped to the door, purple as to his cheeks. Half way he turned and shook his right forefinger at Admiral Brown. "If your son," he said, "presumes to accost my daughter in public again I'll horsewhip him, sir—horsewhip him on the parade or off it, and tell him what I think of him."

"Gad!" said the admiral, as if he had heard a very good joke, "what a show you'd make, the two of you, at that game! 'Pon my word, I'll arrange to be by with my kodak. I suppose you know Eric is one of the champion lightweight boxers?"

General Green put his hand to his forehead.

"Come, old chap," murmured the admiral, moving on his part toward the door, "let's be sensible. At our time of life—"

Down dropped the general's hand. He was an excellently preserved old soldier, barring his gout, which was intermittent. He dyed his hair, wore a corset, drank brandies and sodas and rode a bicycle.

"I—I'll give him a week to apologize," he said tensely; "and if in that time I get no apology I'll give him his lesson."

"I'll tell him what you say. Anything more to give?"

"No, sir," roared General Green. "Our—our friendship's at an end—blasted by that iniquitous young puppy. And I'm glad of it, sir—glad from my heart."

"Wish I could say the same, old chap."

The general seemed to relent, but only for a moment. "There, sir," he said, "I've given you my last words. Good day." He turned to the door and smote the carpet with his stick.

Admiral Brown's mouth twitched mirthfully. "Well," he said calmly, "you've given me a good deal in the course of the last fifteen minutes. Suppose now you give me my hat."

The general started as if he had been pricked, and glanced at the hat in his hand.

Just then the waiter appeared with the ice.

"Take that hat into the gentleman yonder," said the general.

The waiter seemed more perplexed than before. He said, "Certainly, general," yet stared.

The admiral took his hat, smiled with the utmost sweetness, considering what a bronzed and wrinkled old fellow he was, and observed: "The ice is not for me. General Green is rather warm. Take it to him."

But the general hurried from the room, with growls that would have done credit to a small menagerie.

"All right, John," then said Admiral Brown, "I'll have it, and some whiskey and a cigar." He slung himself into the easy chair nearest the window and became grave. He grew more grave as he watched his old friend totter down the club steps and across the road to the Victoria Gardens, shaking his head as if it was somewhat palsied.

"Poor old Green!" he said, with real tenderness. "He's certainly not the man he was a year ago." He was still musing, not altogether gayly—for he too was in the sixties—when the door opened and a handsome young fellow entered.

"Thought I'd find you here," he began; but he broke off with a "Hello! what's the matter?"

Admiral Brown had jumped to his feet, and there was neither sweetness nor light in his eyes now. He faced his son with squared chest and clenched hands.

"Now then, sir," he cried, "I've a tough bone to pick with you. What the dickens do you mean by kissing Helena Green in a public place? Do you know what you've done, sir? You've—"

But Eric Brown's face arrested the further flow of his father's rhetoric. It was grinning in the coolest imaginable manner. Not a particle of shame on it either. "Why hang it all, dad," he said blandly, "she asked me to."

"Asked you to?"

"Point blank. You know what a jolly girl she is, and I confess I'm awfully—"

"I know nothing about her except what I see of her. But you must be out of your mind."

"I thought she was—at first," said Eric, still smiling.

"Tell me the circumstances. Was she drunk, and were you too?"

"Neither of us, I'll swear. Helena drunk! My hat, dad! You're pretty rude."

"The circumstances, sir?" cried the admiral, as if he were again on the Audacity, yelling to a subordinate in a storm.

"The circumstances? Oh, we were just together by chance, you know, on one of the benches at the pumproom end of the gardens, and she was saying how she loathed that beast Sir Titus—"

"The man she's going to marry! A nice little baggage, hang me!"

"Well, yes, sir, if you put it that way. He showed up, white waistcoat, strut, eyeglass, red nose and all the ugly rest of him. He was quite a hundred paces off, you know. We'd been talking commonplace till then; but she changed her manner all at once. 'I want you to do me a favor,' she said, suddenly. 'I'll do it,' said I, as any fellow would. Then she went awfully red and whispered, 'Kiss me—just once—on the cheek.' There wasn't a soul in

sight except that brute. It knocked me silly. 'Will you or will you not?' she went on. I'd no idea she could be so fierce. 'It is a matter of life and death.' Well, I couldn't stand that, of course, and so—I—did it."

Admiral Brown rubbed his nose tip. "She asked you?" he murmured, as if bewildered. "I thought—that is—You're not yarning, my boy?"

"My word! no. Only, you know, this is between ourselves, dad."

"Between ourselves? Why, certainly. Bless my soul!" He seized his hat. "I—I'm going to the pumproom. Don't come with me. Bless my soul!"

He blessed his soul yet again when he was on the club steps.

Admiral Brown came upon General Green in the neighborhood of that little temple arrangement near the pumproom. There was a woman's statue under a stone canopy in the temple. The woman's name was Hygeia. The general was still exceedingly irate, and there was latent feelings of remorse in him, which increased his anger.

"What the mischief has that to do with it if we have been friends for five and forty years?" he was asking himself, while he wiped his forehead with a large sulphur-colored silk handkerchief. Then he turned, for Admiral Brown had addressed him as General Green.

"It's my go now," said the admiral.

"I have done with you, sir!" exclaimed the general, pettishly. "I wish to hold no further communication with you, even by letter."

"Dare say," said the admiral. "You brought an accusation against my boy just now. Well, you've got to apologize."

"I'll see all the Brown family in Hanover first, sir!"

"Unfortunately, we have no estates there. Allow me to tell you that your daughter is a—"

"A what, sir? Out with it. After that you'll say I'm one, I suppose. There's Sir Titus, also; perhaps he's one as well. Robert Brown, I'd never have thought you, of all men, would have gone out of your way to call me a liar."

"No, nor I. But I've come here expressly to tell you something else. You're a silly old fool, Bill Green—that's what you are."

"A silly old fool! Old fool! Thank you. And now perhaps once more you will give me the great advantage of your absence."

"By no means. Where is the minx?"

"Minx, sir?"

"That daughter of yours. She's not fit to pick up my Eric's tennis balls for him. How dared she do such a thing? You've got hold of the wrong end of the stick, my friend; and, by Harry! I'll warn you before I've done with you!"

General Green sat down on one of the temple steps. "The Lord give me patience!" he whispered.

"Precisely. You'll want all the stock you can get, anyhow. Who told you my boy had kissed your enchanting daughter—who, sir?"

"Who, sir? The best witness in the world—Sir Titus Beach, the gentleman who is about to become my son-in-law. I want no more credible witness, sir!"

"Poor devil!" exclaimed the Admiral; "he has my sincerest sympathy. And yet, no; on consideration, he's well quit of her. The young woman who would deliberately sacrifice her reputation and compromise that of a young man in order to insult her fiancé can be no great catch for any one."

The general's hands began to shake; also his head. There was a lack-luster look in his eyes as he fastened them upon Admiral Brown, and his breathing was very rapid.

"Well, what does he say, this fellow Beach? What's he going to do?" proceeded the admiral.

"Do, sir? He says he has half a mind not to have anything more to say to her!"

The general shot out these words as if they were his ultimate degradation.

"Bravo, Beach! Green, I'm really sorry for you. If you feel like yourself again and will take me on at piquet to-night as usual, I will tell you what I'll do. I'll keep it all as dark as—"

There was a weird, cracking sound. The general had drawn one of the deepest breaths in his experience.

"My dear fellow, what has happened to you? Was it a rib?" asked the admiral, with real concern.

The general winked fast, and looked very angry, indeed; never yet had his corset thus betrayed him. But distraction was in sight in the shape of his daughter. The girl was coming along the pine walk with her pug dog held by a string. She looked as graceful as the Lady Hygeia herself, and her pale pink dress was quite as becoming as the statue's somewhat incomplete attire.

"There she is! Now we'll get at the truth!" said the general. "That is," he added, pompously, "my statements will receive the corroboration which I for one do not require."

The admiral hastily took snuff.

"She's a neat little craft, Green," he murmured, "but I'm afraid she doesn't steer true. However—"

The two veterans stumped toward Helena, whose face lit up with smiles. They did not see Master Eric in their background. The smiles were largely for him, though her greeting of the admiral was warm enough to astonish that old man.

"I—I'll beg to be excused, Miss Green!" said Admiral Brown. "Your father—"

"Merely desires a plain answer to an insulting question, my dear," put in the general, testily.

"Papa!" exclaimed the girl. But her astonishment was now lost upon the general, for Eric Brown was now at hand with a telegram.

"I thought I'd bring it on," he said. "My father said you were here. It came the moment you left, dad."

The general snatched the envelope from Eric, giving him a look that would have been alarming if it had not been so grotesque. The message was from Sir Titus Beach:

"This is to say good-by. Under the circumstances, don't expect to be in England again for a year or two. Hope you understand. Sorry."

Admiral Brown's face relaxed into a comfortable smile as he viewed Helena Green. He forgot his grievance against her.

"The impudent rascal! The lying, knock-kneed little upstart!" cried the general.

"Father, dear!" protested his daughter.

"I'll be 'deared' by no one, miss," continued the irascible old man. "'Pon my word, I'll not be answerable for my senses! Here's one fellow charging you with making that young man kiss you in public, and—"

"It is true, papa," said Helena Green in a whisper. Her cheeks were as pink as her dress, but her mouth and eyes were steady.

"True! You did—did you?"

"Take him to a seat, Eric!" said Admiral Brown, quietly.

The old warrior had collapsed and was held up, apparently, by his daughter at one side and Eric Brown at the other. He allowed them to guide him to a bench, where he breathed in heavy gasps.

"Papa, dear!" lamented his daughter, "what is it? Is it your heart?"

The general raised his eyes toward the admiral.

"Heart be hanged!" he said, faintly; and then, with yielding in his gaze, "Read that, Brown."

"Well! well! well! well!" said the admiral when he had read the telegram. Then he looked at his son and the general's daughter and smiled.

"We're well quit of him, sir!" exclaimed General Green, suddenly.

"That may be," said the admiral, pensively. "But my boy's character has to be considered now. When a young man is to all intents and purposes kissed in public—"

Helena Green blushed divinely.

"Shut up, dad!" said Eric Brown. "Once for all, let's settle it," interrupted the general, sternly. "Was there anything between you two here



or hereabouts yesterday afternoon?"

Eric Brown said not a word, but Helena Green spoke out like a hero.

"It was Eric's birthday, papa," she explained, "and I—I said he might kiss me."

"You said—do you mean that he asked if he might—"

But the admiral intervened with a boisterous laugh that cleared the air like a thunderstorm.

"My dear Green," he said, afterward, "that settles everything. Fate's stronger than a couple of old hulks like you and me. And, by Harry, I'm not sorry. There's no one's daughter I'd sooner see Eric married to. He's not a pauper, either. Gets all his poor mother's money, you know."

The general was beaten completely. His astonished eyes wandered from one to another of the three. But the mention of Eric Brown's pecuniary circumstances recalled him to himself.

"She's in the same case," he murmured, nodding at Helena. "My wife's property was entailed, you know."

At these words Admiral Brown stooped and linked his arm into that of his friend. "Come along, old chap; we'll just leave them together," he said.

"The titled nincompoop!" muttered the general, yielding to the admiral's movement.

"Ay, he's all that," said the admiral. Then, turning to the girl: "Fie, fie, my dear! but you've made us all happy."

"Come, Brown," exclaimed General Green, impatiently, "I'm quite ready for a totter, and, if you feel in the humor, I—I'll challenge you to a game of piquet this very minute."

#### A Southern Woman.

The Atlanta Journal tells of the interest shown by one woman in the State Fair as follows:

Miss Rutherford of Sumter county has 709 varieties of agricultural products, home industry and manufacture, fruits, vegetables, fancy work, preserves, pickles, jellies, catsups, sauces, marmalades, wines, vinegars and canned goods put up on the farm; of dried fruits and dried vegetables forty-three varieties.

She made a wreath of pressed flowers, grown at home, also an agricultural wreath of different kinds of seeds, made into flowers, with a girl inside the wreath holding a dove on her finger. She made a motto of different kinds of grain, which read thus: "In Agricultural Diversity is Safety." Another motto, constructed of various kinds of peas, read: "Peas, the Clover of the South." She had many specimens of hay grown in the South.

Among the housewifely arts she had three varieties of soap made at home, hard and compact; also a jar of two-year-old lye soap, which was the old-time standby in plantation homes. She brought to Atlanta quilts of home manufacture—silk quilts, made of fine scraps and relics in silk that had been in the family fifty years at least. Her display in crochet work was multitudinous—168 patterns.

She invented a cast iron cake pan, guaranteed not to scorch the cake while cooking. She had five varieties of the cake, made at home and cooked in her cast iron "tulip" cake pans. They were sampled and pronounced excellent.

This was the work of a country woman on a farm—herself of fine lineage and education—a single woman, who had resolved to make a success of her exhibit, and the State Fair judges considered it worthy of the premium of \$150.

Whatever be our station, with Providence for guide,  
Such fine circumstances ought to make us satisfied.

For the world is full of roses, and the roses full of dew,  
And the dew is full of heavenly love that drips for me and you.

—James Whitcomb Riley.

She—Do you believe in signs?

He—Most assuredly. That's the way I make my living. I'm a sign painter.—Philadelphia Record.

#### A Thanksgiving Turkey.

'Cindy, reach dah 'hine yo' back

'N' han' me dat ah almanac.

W'y, Laud! t'-morrer's Thanksgiving!

Got to get out an' make hay,—

Don' keer whut de preachah say,

We mus' eat Thansgivin' day,

Uz sho' uz yo' 's a-libbin'.

You know whah Mahs Hudson libs?

Dey 's a turkey dah that gibbs

Me a heap o' trouble.

Some day Hudson g'line to mis

Dat owdashus fowl o' his;

I 's g'line ober dah an' twis'

'At gobblah's nake plumb double.

Goin' pas' dah t'othah day,

Turkey strutted up an' say:

"A-gobble, gobble, gobble!"

Much uz ef he mout remark:

"Don' you wish 'at it waz dahk?

Ain't I temptin'?" S' I: "You hahk,

Er else dey'll be a squabble.

"Take an' wring yo' nake right quick,

Light on you lak a thousan' brick.

'N' you won't know whut befell you."

'N' I went on. Yit, evah day,

When I goes by that a-way,

'At fowl hab too much to say;

'N' I'm tiahd uv it, I tell you.

G'ine to go dis bressed night,

An' put out dat turkey's light,

'N' I'll lam 'im lak a cobblah.

Take keer, 'Cindy, lemme pass;

Got to do ma wo'k up fas'

Ain't a-gine to take no sass

Off o' no man's turkey-gobblah.

—James D. Corrothers, in November Century.

#### Serving Fruit.

Fruits of all kinds should occupy a conspicuous place on the breakfast, luncheon and tea table throughout the summer. They are always appetizing, but would be still more appetizing if a few simple rules in preparing them for the table should be observed. Many housekeepers who take great pride in rendering other dishes appetizing with dainty garnishes seem to think that if the fruit sent to the table be only fresh and well looked over they have done everything in their power to render it appetizing. If such housekeepers would adopt a few of the following suggestions they would readily appreciate the difference between a dish of fruit prepared thus and a dish of fruit prepared as follows: All fresh fruit should be very cold when brought to the table. To insure this they should be left in the refrigerator for a few hours before they are served. Grapes, watermelons and cantaloupes should be thoroughly chilled. The favor of many fruits, however, is destroyed by the chilling process. Berries should not be washed unless they are sandy. A careful looking over before they are put in the icebox is all that is necessary. A glass dish is generally considered most suitable for fruit. Green fruit leaves are in many cases the most desirable and most suggested garnish. A watermelon should be chilled and cut in halves, a slice being cut from each end. Place the halves on a flat dish covered with grape leaves. The pulp is scooped out in egg shaped piece with a spoon.

Cantaloupes should be chilled, cut in halves and served also on a bed of grape leaves.

Pineapples should be pared and the eyes taken out with a silver knife. The pulp should be torn into bits with a fork or cut into dice, heaped into a glass dish, sprinkled with sugar and put in the icebox. A little orange juice is delicious with pineapple.

Peaches should be left in the icebox until just before they are served, as they turn dark if left standing after they are pared. Pare them, cut them in halves, arrange in a glass dish decorated with peach leaves, and sprinkle them lightly with sugar. Serve with rich sweet cream.

Oranges and bananas are peeled and sliced, arranged in layers in a glass dish with sugar sprinkled between the layers, chilled on the ice and served with whipped cream.

Raspberries should not be sugared before serving. Serve perfectly cold in a pretty glass dish decorated with green leaves. Before sending them to the table they may be moistened with a lit-

tle currant juice or orange juice, as they are a rather dry fruit.

Currants may be arranged artistically in a large glass dish partly filled with broken ice and decorated around the edges with fresh currant leaves. Place bunches of the fruit upon the ice. Each person at the table should be provided with powdered sugar in which to dip the currants before eating them from the stem.

Cherries may be served in the same way.

A delicious way to serve almost any kind of berry is to heap the chilled fruit in the center of a glass dish and surround with a wreath of whipped and sweetened cream, or the cream may be heaped in a mound in the center and the berries poured around it.

Fruit to be really good must fulfill these requirements. It must be perfectly fresh, of a good quality and thoroughly ripe.—Youth's Companion.

#### What to do With the Babies.

In reply to "Farmer's" query—"What on earth women take babies to public meetings for?"—I would say it is doubtless because "Farmer" would not stay at home and care for them; so, evidently, if she did not take them, she could not go to public meetings or any other meeting. I should think a farmer's wife would be interested in a Farmer's Institute; and if she has no one to leave her babies with, let her go and take them along.—FARMER'S WIFE in El Dorado Republican.

"They say money is a drug in the market." "Is it? I feel like prescribing myself a large number of doses."—Puck.

#### DOMESTIC ECONOMY.

##### Hints to Housekeepers.

If poison has been taken, swallow instantly a cupful of cold water with which a teaspoonful of pulverized mustard and the same quantity of salt have been mixed. This is a simple, but effective remedy. After it, the whites of two or three raw eggs should be taken.

For griddle cakes make a mixture of one cupful of graham flour, one cupful of white flour, one teaspoonful of baking powder, one teaspoonful of salt, two teaspoonfuls of sugar. Make a soft batter with cold water, and the last thing beat in an egg lightly. Fry on a griddle.

Stuffed tomatoes are also easily carried. It is better not to skim them, lest they crush. Wash and dry them, cut a thin slice from the top, chop the pulp without removing it, leaving a good thick wall. Add two or three drops of onion juice to each, a tablespoonful of mayonnaise dressing and one-half teaspoonful of chopped parsley. Salt and pepper to taste, and add a chopped olive if it is wanted. Place the cover on each tomato, pack closely in a box, and carry it right side up.

Spiced plums are a delicious relish for meats. Wash, drain and prick six pounds of damsons. Make a syrup of six pounds of sugar, two and three-quarter quarts of vinegar, and three-quarters of an ounce each of ground cinnamon, cloves, mace and allspice. Pour the boiling syrup over the plums and let them stand three days. Then skim out the fruit and put them into a stone jar. Boil the syrup until it is quite thick, and turn it over the plums. Cover the jar closely.

The newest thing in china that is now seen, and which is regarded as being particularly smart, is the "all-over white." It would seem that this style had appeared as a reaction to the much decorated wares. But this late fad will only be found to be desirable when produced in the finest wares and with all the accompanying elegances. A set that has recently been brought to this country is of the finest quality of Min-tern, and has an exquisite finish, a gray white, said to be very new. About every piece is a narrow and scalloped gold edge. The only other bit of color

that is seen is the arms of the family, done at the sides of the pieces, not in the center, and in olive green.

#### Domestic Hints.

ESCALLOPED APPLES.—To make it, slice thin six apples. Butter a baking dish. Place a layer of apples in the bottom, sprinkle them lightly with powdered crackers, and dot the surface generously with pieces of butter. Continue until the dish is full. Cover the top with buttered cracker crumbs and bake in a slow oven until the apples are cooked and the top browned. Serve with a hard sauce.

PUFF PASTE SHELLS.—For a luncheon or dinner dessert, an almond pudding baked in individual or large shells is made as follows: Blanch and pound fine with one tablespoonful of rose water one and one-half cupfuls of almonds. Mix these with one-fourth cupful of powdered cracker crumbs, four cupfuls of milk and five eggs beaten thoroughly with one-fourth cupful of powdered sugar. Serve cold.

FROZEN CUSTARD.—Take one quart milk, six eggs (yolks), one cup sugar, one tablespoonful salt, flavoring. Scald the milk. Beat the yolks till thick and creamy, add the sugar and salt and beat again. Pour the hot milk over them, and when well mixed turn into the double boiler and cook until thick and creamy. Stir constantly and lift the boiler up from the fire occasionally, to check the cooking. Strain at once, and when cool, flavor to taste. This will be greatly improved by adding a little cream (even if it be but half a cupful) just before freezing. When eggs and milk are used without cream in making ice cream, they should always be cooked before freezing.

CRULLERS.—One pint of sour milk, two eggs, four teaspoonfuls of melted lard, two teaspoonfuls of soda, one teaspoonful of cream of tartar, one and one-half cupfuls of sugar, one-half teaspoonful of salt, nutmeg or other flavoring to taste, and add flour to make as soft a batter as can be handled. If allowed to stand on the ice until thoroughly chilled and only a part of the mixture is put on to the board at a time, a softer paste can be used than if used while warm, and the crullers will be proportionally lighter and more delicate. Roll into sheets one-half inch thick and cut into rounds with a hole in the center. Fry in deep fat and keep them turning with a long toasting fork. Fry to a golden brown. If too many are added at one time the fat will be cooled.

#### ANÆMIA

Pale, thin, weak, run-down,  
low spirits, no appetite.

Rosy and plump, fair  
strength, with pleasure in work,  
get hungry three times a day,  
and like good food.

Which of these two pictures  
is yours?

There are ways to either  
condition. Skip the first, for  
nobody wants to be in it. If  
in it, the way to the second is  
Scott's emulsion of cod-liver  
oil, with proper attention to  
course of life.

We'll send you a little to try if you like.  
SCOTT & BOWNE, 409 Pearl street, New York



## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Nov. 14, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

|                | Dec.         | Jan.         |
|----------------|--------------|--------------|
| Wednesday..... | 74% @ 73 1/4 | 75% @ 74 1/4 |
| Thursday.....  | 72% @ 73 1/4 | 73% @ 74 1/4 |
| Friday.....    | 73 @ 73 1/4  | 73% @ 74 1/4 |
| Saturday.....  | 73% @ 74 1/4 | 74% @ 75 1/4 |
| Monday.....    | 73% @ 74 1/4 | 74% @ 75 1/4 |
| Tuesday.....   | 74 @ 72 1/2  | 74% @ 73 1/4 |

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

|                | Dec.       | Mar.       |
|----------------|------------|------------|
| Wednesday..... | 6s 1 1/2 d | 6s 2 1/4 d |
| Thursday.....  | 6s 0 1/2 d | 6s 1 1/2 d |
| Friday.....    | 6s 0 1/2 d | 6s 1 1/2 d |
| Saturday.....  | 6s 0 1/2 d | 6s 2 1/4 d |
| Monday.....    | 6s 0 1/2 d | 6s 2 1/4 d |
| Tuesday.....   | 6s 0 1/2 d | 6s 1 1/2 d |

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

|                | Dec.                | May.             |
|----------------|---------------------|------------------|
| Thursday.....  | — @ —               | 1 05% @ 1 06%    |
| Friday.....    | 1 00% @ 1 00%       | 1 07 @ 1 07 1/2  |
| Saturday.....  | 1 01% @ 1 01 1/4    | 1 08% @ 1 08%    |
| Monday.....    | 1 01 1/4 @ 1 01 1/4 | 1 08 @ 1 08 1/2  |
| Tuesday.....   | 1 00 1/4 @ 1 01 1/4 | 1 07% @ 1 06%    |
| Wednesday..... | 99 1/2 @ 99 1/2     | 1 06 1/4 @ 1 06% |

## WHEAT.

The local wheat market developed additional strength the past week, despite reports from the Argentine section in the bear interest and to the effect that the shortage there in the wheat crop would not prove so great as first estimated, and despite statements from Russia, contradicting previous reports of scarcity of breadstuffs in some sections, claiming that Russia's last crop was considerably larger than any yield of the three years immediately preceding. As a matter of fact, there is no reason why Russia's crop, whether large or small, should have any material effect on the market for California wheat, hardly as much so as the price of corn in Kansas and Nebraska. Russia's wheat is mostly dark red, while California wheat is principally white, and the two do not come into competition with each other in the European market. Australia and Chile are our principal competitors in the wheat marts of the old world, but more particularly Australia. Whatever the cause, Eastern and foreign markets showed more firmness, and in connection with this there was still a more important factor in improving the tone of the market locally, and that was the prospect of lower ocean freight rates, with shipping in somewhat better supply. Stocks of wheat in the United States east of the Rockies are given at 60,703,000 bushels, showing an increase for week of only 669,000 bushels.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, 99c @ \$1.01 1/4.  
May, 1901, delivery, \$1.05 1/2 @ \$1.08 1/4.  
Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at 99 1/2 @ 99 3/4 c.; May, 1901, \$1.06 1/4 @ \$1.06 1/2.

|                                     |                   |
|-------------------------------------|-------------------|
| California Milling.....             | \$1 00 @ 1 05     |
| Cal. No. 1 shipping, alongside..... | 97 1/4 @ 1 00     |
| Oregon Valley.....                  | 97 1/4 @ 1 00     |
| Washington Blue Stem.....           | 1 00 @ 1 02 1/4   |
| Washington Club.....                | 97 1/4 @ 1 02 1/4 |
| Off qualities wheat.....            | 92 1/2 @ 95       |

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

|                      | 1899-1900.              | 1900-01.              |
|----------------------|-------------------------|-----------------------|
| Liv. quotations..... | 6s 2 1/2 d @ 6s 2 1/2 d | 6s 3 1/4 d @ 6s 4 d   |
| Freight rates.....   | 32 1/2 @ 35s            | 40 @ 42 1/2 s         |
| Local market.....    | \$1 03 1/4 @ 1 06 1/4   | \$0 98 1/2 @ 1 01 1/4 |

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

The movement was not so brisk as preceding week, nor was there any special change to record in quotable rates. There was a little better tone, however, in sympathy with the firmer feeling developed for wheat. While flour values are not likely to soon materially advance, it looks as though they had for the present touched bedrock.

|                                |               |
|--------------------------------|---------------|
| Superfine, lower grades.....   | \$2 25 @ 2 50 |
| Superfine, good to choice..... | 2 60 @ 2 80   |
| Country grades, extras.....    | 3 15 @ 3 40   |
| Choice and extra choice.....   | 3 40 @ 3 65   |
| Fancy brands, jobbing.....     | 3 60 @ 3 75   |
| Oregon, Bakers' extra.....     | 2 90 @ 3 25   |
| Washington, Bakers' extra..... | 2 90 @ 3 40   |

## BARLEY.

Business in this cereal has not been what could be termed brisk during the week under review, but the market has been in

the main firm, more so than during preceding week, especially for feed descriptions, these constituting the bulk of present offerings and receiving the most attention. Aside from small quantities reserved for seed, stocks of Chevalier are practically exhausted. High grade brewing Barley is not in heavy supply, and in some instances is held above quotable rates. Trading on Call Board was slow, but was in the main at higher figures than during preceding week.

|                                 |                   |
|---------------------------------|-------------------|
| Feed, No. 1 to choice.....      | 75 @ 77 1/2       |
| Feed, fair to good.....         | 70 @ 72 1/2       |
| Brewing, No. 1 to choice.....   | 80 @ 85           |
| Chevalier, No. 1 to choice..... | 97 1/4 @ 1 02 1/4 |
| Chevalier, No. 2.....           | 85 @ 90           |
| Chevalier, poor.....            | 70 @ 75           |

## OATS.

Values continue to be well maintained at previously quoted range, with Red and Black Oats in most liberal supply and choice White in lightest stock. Buyers are not active or eager purchasers at full current figures, but they find it impossible to obtain noteworthy concessions in their favor, especially on desirable qualities.

|                               |                     |
|-------------------------------|---------------------|
| White Oats, fancy feed.....   | 1 37 1/2 @ 1 42 1/2 |
| White, good to choice.....    | 1 30 @ 1 35         |
| White, poor to fair.....      | 1 20 @ 1 27 1/2     |
| Gray, common to choice.....   | 1 20 @ 1 32 1/2     |
| Millings.....                 | 1 42 1/2 @ 1 45     |
| Surprise, good to choice..... | 1 40 @ 1 45         |
| Black Russian.....            | 1 12 1/2 @ 1 25     |
| Red.....                      | 1 15 @ 1 32 1/2     |

## CORN.

While this market is a little better supplied with both domestic and Eastern than for some time past, no particular weakness has been developed, nor are there likely to be any very pronounced breaks in values in the near future.

|                                      |                 |
|--------------------------------------|-----------------|
| Large White, good to choice.....     | 1 22 1/2 @ 1 25 |
| Large Yellow.....                    | 1 30 @ 1 24 1/2 |
| Small Yellow.....                    | 1 40 @ —        |
| Eastern, in bulk (carload lots)..... | 1 14 @ 1 17     |

## RYE.

Spot offerings are not heavy, but are ample for the immediate limited demand.

|                          |             |
|--------------------------|-------------|
| Good to choice, new..... | 87 1/2 @ 90 |
|--------------------------|-------------|

## BUCKWHEAT.

Stocks and offerings are small and market is firm at quotably unchanged rates.

|                     |             |
|---------------------|-------------|
| Good to choice..... | 1 75 @ 1 90 |
|---------------------|-------------|

## BEANS.

Buyers have been shouting about Eastern beans being likely to be landed here, hoping thereby to depress the market, but the effort has been thus far unsuccessful. White beans are being very steadily held, with offerings of quite moderate volume. Pinks have shown some weakness, recent receipts of this variety being tolerably heavy and ahead of immediate demand for same. Prices for Bayos, on the other hand, hold up quite well. In Reds there is little doing, offerings and demand being both light. Limas are ruling about as last quoted, with stocks in this center of very moderate proportions.

|                                  |             |
|----------------------------------|-------------|
| Pea, fair to good, 100 lbs.....  | 3 75 @ 4 00 |
| Small White, good to choice..... | 3 90 @ 4 10 |
| Lady Washington.....             | 2 85 @ 3 15 |
| Butter.....                      | 4 07 @ 4 50 |
| Pinks.....                       | 1 80 @ 2 10 |
| Bayos, good to choice.....       | 2 65 @ 2 90 |
| Reds.....                        | 2 50 @ 3 00 |
| Limas, good to choice.....       | 5 15 @ 5 30 |
| Black-eye Beans.....             | 3 00 @ 3 25 |
| Horse Beans.....                 | 1 75 @ 2 00 |
| Garbanzos, large.....            | 2 00 @ 2 25 |
| Garbanzos, small.....            | 1 25 @ 1 75 |

Recent advices by mail from New York give the following report of the bean market, prices quoted being per 60-pound bushel:

Receipts have increased rapidly—nearly doubling those of last week—and the trade has for the first time this season become pretty well stocked up. A great deal of the business was the delivery of stock on previous purchases, largely October contracts, and it has been slow work getting buyers interested in new deals; hence with a tendency to accumulate goods and still larger supplies in sight sellers have sought to widen the outlets by naming lower prices. Marrow opened at \$2.50, but have gradually settled to \$2.45, and close weak, with some pretty good stock selling at \$2.40. The great scarcity of Medium has enabled receivers to get full prices for them. Pea have fallen steadily and best quality in barrels are offering freely at \$2.05, with bag stock seeking custom at \$2. The high price at which new Red Kidney opened has evidently affected the export demand and orders have since come forward slowly; this has resulted in a steady decline and it is now difficult to do business at \$2.45. Choice old slow at \$2.25. A few nice White Kidney would sell well. Yellow Eye not plenty and have advanced to \$2.35. Turtle Soup moving slowly only in a jobbing way. Lima are leaning a little more in buyers' favor; quotable at \$3.50 @ \$3.75. Green and Scotch peas slightly weaker.

## DRIED PEAS.

The same firm tone previously noted

continues to prevail in the market for Dried Peas, both Green and Niles. Spot stocks are small and there are no great quantities offering to arrive.

|                             |             |
|-----------------------------|-------------|
| Green Peas, California..... | 2 50 @ 2 75 |
| Niles Peas.....             | 2 00 @ —    |

## WOOL.

There is considerable inquiry, and would likely be an increased movement to report, but for the fact that holders as a rule have advanced asking figures sufficiently to check buyers. Wools would now move at prices which many holders would have been willing to accept a month ago. At the stiffer figures generally contended for, however, the market may not develop much activity for some time.

## SPRING.

|                                      |         |
|--------------------------------------|---------|
| Humboldt and Mendocino.....          | 16 @ 17 |
| Northern, free.....                  | 14 @ 15 |
| Northern, defective.....             | 12 @ 13 |
| Middle Counties, free.....           | 14 @ 15 |
| Middle Counties, defective.....      | 11 @ 13 |
| Southern, 12 mos.....                | 8 @ 10  |
| Southern, free, 7 mos.....           | 9 @ 11  |
| Southern, defective, 7 mos.....      | 8 @ 9   |
| Oregon Valley, fine.....             | 17 @ 18 |
| Oregon Valley, coarse to medium..... | 16 @ 17 |
| Eastern Oregon, choice.....          | 13 @ 16 |
| Eastern Oregon, fair to good.....    | 10 @ 12 |
| Nevada, as to condition.....         | 11 @ 15 |

## FALL.

|                             |         |
|-----------------------------|---------|
| Humboldt and Mendocino..... | 11 @ 13 |
| Middle County.....          | 9 @ 10  |
| San Joaquin.....            | 7 @ 9   |
| San Joaquin Lambs.....      | 8 @ 9   |

## HOPS.

Market is quiet, but tolerably firm for good to choice stock, without being appreciably or quotably higher. Stiffer figures than herewith quoted are still being asked, and are being realized in a small way, but are not obtainable in wholesale fashion. Stocks in growers' hands in Oregon are estimated at 18,000 to 20,000 bales.

|                               |         |
|-------------------------------|---------|
| Good to choice 1900 crop..... | 13 @ 15 |
|-------------------------------|---------|

The following report of the hop market is from a New York authority and is furnished by mail of recent date:

A comparison of receipts and exports shows an unusually early movement of the crop. In the first two months of the season over three times as many hops were received here as there were during the same time last year, while the exports have been over four times as large. At all interior points in this State there has been continued free buying again this week and higher prices have been paid. Most of the purchases have been at 16 @ 18c., a few growths at 14 @ 15c., and some of the choicest lots in the most favored localities have reached 20c. On the Pacific coast the market has ruled very strong, and a considerable part of the crop has already passed out of first hands. It is said on pretty good authority that not over 12,000 to 15,000 bales of Oregon hops remain in growers' hands. The strength shown in the country has been reflected here, and the local market has become more active and higher. Exporters have filled some orders, and brewers' operations have evinced a feeling that the time had come to secure more stock. We advance quotations for most grades of 1900 hops, both State and Pacific coast, but the former are now taking the lead. Latest advices from London report the market in better shape and prospect of continued business with America. Official returns place the English crop at 347,000 cwt., as compared with 661,000 cwt. in 1899.

## HAY AND STRAW.

The hay market is showing steadiness, but offerings are fairly liberal, as compared with immediate demand. According to statement of San Francisco Hay Exchange, stocks on hand November 1st in the section tributary to this center were 99,500 tons as against 157,500 tons a year ago. Straw is in light receipt and in fair request at unchanged values.

|                      |              |
|----------------------|--------------|
| Wheat.....           | 9 00 @ 13 00 |
| Wheat and Oat.....   | 9 00 @ 12 00 |
| Oat.....             | 8 00 @ 12 00 |
| Barley.....          | 7 00 @ 9 00  |
| Volunteer.....       | 6 00 @ 7 50  |
| Alfalfa.....         | 8 00 @ 9 50  |
| Stock.....           | 5 50 @ 7 00  |
| Compressed.....      | 9 00 @ 13 00 |
| Straw, 1/2 bale..... | 35 @ 45      |

## MILLSTUFFS.

Bran market was weak and lower, with offerings at reduced rates much greater than immediate custom could be found for. Although stocks of Middlings and Shorts were not heavy, market for these also inclined in favor of the consuming interest. Rolled Barley ruled steady, as did also Milled Corn.

|                     |               |
|---------------------|---------------|
| Bran, 1/2 ton.....  | 13 50 @ 14 50 |
| Middlings.....      | 16 50 @ 19 00 |
| Shorts, Oregon..... | 14 00 @ 15 50 |
| Barley, Rolled..... | 16 00 @ 16 50 |
| Cornmeal.....       | 26 00 @ —     |
| Cracked Corn.....   | 27 00 @ —     |

## SEEDS.

Alfalfa seed market is quite firm and gives promise of so continuing throughout

the season. For good California Alfalfa 8 1/2 c was bid, San Francisco delivery, and the seed was not secured at this figure. Mustard seed is in too light supply to be quotable. Flaxseed was in free receipt from Puget Sound, the shipments going directly to the oil works.

|                          |             |
|--------------------------|-------------|
| Mustard, Trieste.....    | — @ —       |
| Mustard, Yellow.....     | — @ —       |
| Flax.....                | 2 00 @ 2 50 |
| Alfalfa, Utah.....       | 9 1/4 @ 10  |
| Alfalfa, California..... | 8 1/4 @ 9   |
| Canary.....              | 3 1/4 @ 4   |
| Rape.....                | 2 @ 3       |
| Hemp.....                | 3 1/4 @ 4   |

## BAGS AND BAGGING.

Not much doing in Grain Bags, as is invariably the case at this season of the year. There is a moderately firm undertone, in sympathy with conditions existing at Calcutta, where prices are stiffer than a year ago, owing mainly to advanced cost of raw product. It is yet too early, however, to form any definite idea of ruling values here the coming season.

|                                             |               |
|---------------------------------------------|---------------|
| Calcutta Grain Bags, buyer June-July.....   | 6 1/4 @ 6 1/2 |
| Calcutta Grain Bags, spot.....              | 6 @ —         |
| San Francisco Grain Bags, 22x36, spot.....  | 5 1/2 @ 6     |
| State Prison Bags in lots of 2000, 100..... | — @ —         |
| Wool Sacks, 4 lbs.....                      | — @ 32 1/2    |
| Wool Sacks, 3 1/2 lbs.....                  | — @ 28 1/2    |
| Fleece Twine.....                           | 7 1/4 @ —     |
| Gunnies.....                                | — @ 12 1/2    |
| Bean Bags.....                              | 4 1/2 @ 5 1/4 |
| Fruit Sacks, cotton.....                    | 6 1/4 @ 7 1/4 |

## HIDES, PELTS AND TALLOW.

The last quoted advance for Hides is being maintained. Pelt market is fairly steady, but not very brisk. Tallow is not lacking for custom at current figures.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

|                                     | Sound.            | Culls.    |
|-------------------------------------|-------------------|-----------|
| Heavy Steers, over 56 lbs.....      | 10 @ 9            | 9 @ 8     |
| Medium Steers, 48 to 56 lbs.....    | 9 @ 8             | 8 @ 7 1/2 |
| Light Steers, under 48 lbs.....     | 8 1/2 @ 7 1/2     | 7 1/2 @ 7 |
| Heavy Cow Hides, over 50 lbs.....   | 8 1/2 @ 7 1/2     | 7 1/2 @ 7 |
| Light Cow Hides, under 50 lbs.....  | 8 1/2 @ 7 1/2     | 7 1/2 @ 7 |
| Wet Salted Kip.....                 | 9 @ 8             | 8 @ 7     |
| Wet Salted Veal.....                | 9 @ 8             | 8 @ 7     |
| Wet Salted Calf.....                | 10 @ 9            | 9 @ 8     |
| Dry Hides.....                      | 16 @ 13           | 13 @ 10   |
| Dry Kip and Veal, 11 to 16 lbs..... | 15 @ 16 @ 13 @ 14 | 14 @ 13   |
| Dry Calf, under 4 lbs.....          | 16 @ 13           | 13 @ 10   |
| Salted Horse Hides, large.....      | 2 50 @ —          | — @ —     |
| Salted Horse Hides, medium.....     | 2 00 @ —          | — @ —     |
| Salted Horse Hides, small.....      | 1 00 @ —          | — @ —     |
| Dry Horse Hides, large.....         | 1 75 @ —          | — @ —     |
| Dry Horse Hides, small.....         | 1 00 @ 1 50       | — @ —     |
| Dry Colts' Hides.....               | 50 @ —            | — @ —     |
| Pelts, long wool, 1/2 skin.....     | 80 @ 100          | — @ —     |
| Pelts, medium, 1/2 skin.....        | 60 @ 85           | — @ —     |
| Pelts, short wool, 1/2 skin.....    | 30 @ 50           | — @ —     |
| Pelts, shearing, 1/2 skin.....      | 15 @ 25           | — @ —     |
| Deer Skins, best summer.....        | 27 1/2 @ 30       | — @ —     |
| Deer Skins, good medium.....        | 20 @ 22 1/2       | — @ —     |
| Deer Skins, thin winter.....        | — @ 10            | — @ —     |
| Elk Hides.....                      | 10 @ 12           | — @ —     |
| Tallow, good quality.....           | 4 @ —             | — @ —     |
| Tallow, No. 2.....                  | 3 @ 3 1/4         | — @ —     |
| Goat Skins, perfect.....            | 30 @ 37 1/2       | — @ —     |
| Goat Skins, damaged.....            | 10 @ 20           | — @ —     |
| Kid Skins.....                      | 5 @ 10            | — @ —     |

## HONEY.

There are no new developments, in fact no chance for anything new, stocks being of such insignificant proportions. Choice water white, either Comb or Extracted, is in such scanty supply that quotations for this description must be regarded as wholly nominal.

|                              |                 |
|------------------------------|-----------------|
| Extracted, White Liquid..... | 7 1/4 @ 8       |
| Extracted, Light Amber.....  | 6 1/4 @ 7 1/4   |
| Extracted, Amber.....        | 5 1/4 @ 6 1/4   |
| White Comb, 1 lb frames..... | 13 @ 14         |
| Amber Comb.....              | 11 1/4 @ 12 1/4 |
| Dark Comb.....               | 8 @ 9           |

## BEESWAX.

Very little coming forward from any quarter. Buyers are much more readily found than sellers at current figures.

|                                  |         |
|----------------------------------|---------|
| Good to choice, light, 1 lb..... | 24 @ 28 |
| Dark.....                        | 26 @ 25 |

## LIVE STOCK AND MEATS.

Beef of No. 1 quality is not offering freely and market is firm at quotations. Mutton ruled firm, with demand very fair and no excess of supplies. There was no scarcity of Small Veal, but choice Large was in light receipt. Tendency on Lamb was to firmer figures. Hogs of desirable size, medium and small, were in good request and brought an advance.

|                                               |               |
|-----------------------------------------------|---------------|
| Beef, first quality, dressed, net 1/2 lb..... | 6 1/2 @ —     |
| Beef, second quality.....                     | 6 @ 6 1/2     |
| Beef, third quality.....                      | 5 @ 5 1/2     |
| Mutton—ewes, 70 @ —; wethers.....             | 7 1/2 @ 8     |
| Hogs, hard grain fed, medium.....             | 5 1/2 @ 5 1/2 |
| Hogs, small, fat.....                         | 5 1/2 @ 5 1/2 |
| Hogs, large, hard.....                        | 5 1/2 @ —     |
| Hogs, feeders.....                            | 5 @ 5 1/2     |
| Hogs, country dressed.....                    | 6 1/2 @ 7     |
| Veal, small, 1/2 lb.....                      | 7 @ 9 1/4     |
| Veal, large, 1/2 lb.....                      | 8 @ 8 1/2     |
| Lamb, spring, 1/2 lb.....                     | 8 @ 9         |

## POULTRY.

With continued free receipts of Eastern poultry, the market for California product was given little or no opportunity to im-



prove. Especially was this the case in regard to old and full-grown young fowls, these having to come into direct competition with imported stock. Choice Broilers and Fryers, more particularly the former, brought comparatively good figures. Turkeys did not lack for attention, some dealers buying up ahead on account of Thanksgiving. In making consignments, shippers should be sure that the consignees are reliable, and place no confidence in the statements of mushroom and unknown concerns.

|                                           |  |
|-------------------------------------------|--|
| Turkeys, live hens, 13 @ 14               |  |
| Turkeys, live gobblers, 13 @ 14           |  |
| Turkeys, Dressed, per lb. 14 @ 16         |  |
| Hens, California, 3 50 @ 4 50             |  |
| Roosters, old, 3 50 @ 4 00                |  |
| Roosters, young (full-grown), 3 50 @ 4 50 |  |
| Fryers, 3 25 @ 3 50                       |  |
| Broilers, large, 3 25 @ 3 50              |  |
| Broilers, small, 3 00 @ 3 25              |  |
| Ducks, old, 3 00 @ 4 00                   |  |
| Ducks, young, 3 50 @ 4 50                 |  |
| Geese, 1 50 @ 1 75                        |  |
| Goslings, 1 75 @ 2 00                     |  |
| Pigeons, old, 1 00 @ —                    |  |
| Pigeons, young, 1 50 @ 1 75               |  |

#### BUTTER.

Much the same unsatisfactory state of affairs for the producer as previously noted is prevailing in the Butter market. Strictly choice to select fresh is not plentiful, but there is a glut of ordinary qualities, largely the product of cows just recently calved. Some dairymen are criminally careless in this regard, using milk which is wholly unfit for food. Poor feed in many localities is also operating against the production of fine butter.

|                                               |  |
|-----------------------------------------------|--|
| Creamery, extras, 22 @ —                      |  |
| Creamery, firsts, 20 @ 21                     |  |
| Creamery, seconds, 19 @ 20                    |  |
| Dairy, select, 20 @ 21                        |  |
| Dairy, seconds, 18 @ 19                       |  |
| Dairy, soft and weedy, — @ —                  |  |
| Mixed store, 16 @ 17                          |  |
| Creamery in tubs, 20 @ 22                     |  |
| Pickled Roll, 20 @ 21                         |  |
| Pirkin, California, choice to select, 20 @ 21 |  |
| Pirkin, common to fair, 17 @ 18               |  |

#### CHEESE.

Stocks are not heavy, and especially is mild new of high grade in light supply. There is a good demand and market is firm at the quotations noted. Supplies of imported are light. Eastern markets are in healthy shape.

|                                           |  |
|-------------------------------------------|--|
| California, fancy flat, new, 11 @ 12      |  |
| California, good to choice, 10 @ 11       |  |
| California, fair to good, 9 1/2 @ 10      |  |
| California Cheddar, — @ —                 |  |
| California, "Young Americas", 10 @ 12 1/2 |  |

#### EGGS.

The market is still suffering from the effects of crowding prices too high in the interest of cold storage Eggs. The extreme figure for best fresh this week is fully 10c. under the top prices exacted a fortnight ago. Some fresh Eggs, averaging small in size and running irregular as to color, have sold down to price of No. 1 cold storage stock. That the market will recover materially during the balance of the year is possible, but not probable.

|                                                         |  |
|---------------------------------------------------------|--|
| California, select, large, white and fresh, 32 1/2 @ —  |  |
| California, select, irregular color & size, 27 1/2 @ 30 |  |
| California, good to choice store, 23 @ 27               |  |
| Eastern, as to section and grading, 20 @ 25             |  |
| Eastern, cold storage, — @ —                            |  |

#### VEGETABLES.

The list is being narrowed down to mid-winter dimensions. The market for desirable qualities of nearly all kinds now in season showed firmness. Onions ruled higher than last quoted. Peas and String Beans were in light supply and brought comparatively fancy prices.

|                                     |  |
|-------------------------------------|--|
| Beans, String, 4 @ 6                |  |
| Beans, Wax, 4 @ 6                   |  |
| Beans, Lima, 2 1/2 @ 3 1/2          |  |
| Cabbage, choice garden, 1 00 @ 1 25 |  |
| Cauliflower, 50 @ —                 |  |
| Cucumbers, Bay, 30 @ 60             |  |
| Egg Plant, 40 @ 65                  |  |
| Garlic, 4 @ 5                       |  |
| Onions, Yellow Danver, 1 20 @ 1 35  |  |
| Peas, Sweet, garden, 4 @ 6          |  |
| Peppers, Green Chile, 35 @ 60       |  |
| Tomatoes, River, 30 @ 65            |  |

#### POTATOES.

Arrivals were of fairly liberal volume, and ordinary qualities were in sufficient supply, as compared with the inquiry, to cause market for such stock to rule weak. Choice to select potatoes naturally received the most attention, and for this description values ruled steady. Sweet potatoes were not in heavy receipt, but demand for them was slim and market inclined against sellers.

|                                     |  |
|-------------------------------------|--|
| Burbanks, River, 30 @ 60            |  |
| Burbanks, Petaluma-Tomales, 35 @ 60 |  |
| Burbanks, Salinas, 1 00 @ 1 25      |  |
| Burbanks, Oregon, 55 @ 90           |  |
| Sweet Potatoes, Yellow, 50 @ 100    |  |

#### The Fruit Market.

#### FRESH FRUITS.

Apple market was liberally stocked with common to medium qualities, while choice

to fancy were in comparatively light stock. Prices were at a decidedly wide range. Poor Apples were offered down to 25c. per box, while fancy Oregon Spitzenberg were held at \$1.50 per box. The bulk of the business was within range of 40c. @ \$1. Sales above latter figure were confined mainly to select fruit. Pear market ruled quiet, and, although supplies were not heavy, there was a lack of firmness for other than most desirable Winter Nelis, these selling fairly well. Grapes made a poor display; good qualities brought in a small way tolerably stiff figures. Persimmons and Pomegranates were in such light stock as to be hardly quotable. There were no heavy offerings of Berries of any sort, neither was demand for them very active.

|                                            |  |
|--------------------------------------------|--|
| Apples, fancy, 4-tier box, 1 00 @ 1 25     |  |
| Apples, good to choice, 50-lb box, 60 @ 90 |  |
| Apples, common to fair, 50-lb box, 25 @ 50 |  |
| Grapes, Tokay, 50 @ 90                     |  |
| Grapes, Black, 50 @ 90                     |  |
| Grapes, Muscat, 50 @ 90                    |  |
| Raspberries, 5 00 @ 7 00                   |  |
| Pears, Winter Nelis, 60 @ 1 25             |  |
| Pears, common kinds, 30 @ 75               |  |
| Persimmons, 40 @ 85                        |  |
| Quinces, 40 @ 75                           |  |
| Strawberries, Longworth, 9 00 @ 10 00      |  |
| Strawberries, Large, 3 50 @ 5 00           |  |
| Whortleberries, 4 @ 6                      |  |

#### DRIED FRUITS.

The market for cured and evaporated fruits remains quiet throughout. Packers have been doing only a moderate business and mainly out of their own stocks. There has been considerable pressure to realize, and as is generally the case where selling pressure is exerted on a slow market, there has been more or less cutting of rates, perhaps more on Apples and Pears than on other kinds, these being offered rather freely from first hands, with little or no inquiry from buyers for the time being. Peaches inclined against sellers, going at lower average prices than were current earlier in the season, although the quotable range remained about as previously noted. Pitted Plums were not offered in heavy quantities, but they were not readily placed at full current quotations. Figs dragged, although although obtainable at comparatively low figures. Packers and jobbers are, in fact, buying little dried fruit of any sort not needed in the filling of immediate orders, except where they can secure stock at decidedly low figures and at less than nominally current rates. The producer has to either carry the surplus stock or slaughter the goods. Apricots show steadiness from the simple fact that they are practically out of first hands. Prunes are without quotable change, but movement in them is not brisk, and the market is still being handicapped by some non-Association stocks, which are selling 1/2c. to 3/4c. under Association prices. Offerings of Silver Prunes are rather limited, and values for this description are being fairly well maintained.

#### EVAPORATED OR BLEACHED.

|                                                                    |  |
|--------------------------------------------------------------------|--|
| Apricots, Royal, prime, 6 1/2 @ 7                                  |  |
| Apricots, Royal, choice, in sacks, 7 1/2 @ 8                       |  |
| Apricots, Royal, fancy, 9 @ —                                      |  |
| Apricots, Moorpark, 9 1/2 @ 11 1/2                                 |  |
| Apples, in 50-lb boxes, rings, pressed, fancy, 5 1/4 @ 5 1/2       |  |
| Apples, 50-lb boxes, rings, pressed, good to choice, 3 1/2 @ 4 1/2 |  |
| Figs, White, fancy pressed, 6 @ 7                                  |  |
| Nectarines, 4 @ 6                                                  |  |
| Peaches, unpeeled, fancy, 6 @ 6 1/2                                |  |
| Peaches, unpeeled, choice, 5 @ 5 1/2                               |  |
| Peaches, peeled, in boxes, 11 @ 14                                 |  |
| Pears, unpeeled Bartlett's, halved, fancy, 5 @ 6                   |  |
| Pears, halved, unpeeled Bartlett's, 3 1/2 @ 4                      |  |
| Pears, quartered, unpeeled Bartlett's, 3 1/2 @ 4 1/2               |  |
| Plums, Black, pitted, 4 @ 5                                        |  |
| Plums, White and Red, 5 @ 6                                        |  |
| Prunes, Silver, 4 1/2 @ 6                                          |  |

#### COMMON SUN-DRIED.

|                            |  |
|----------------------------|--|
| Apples, sliced, 2 @ 3      |  |
| Apples, quartered, 2 @ 3   |  |
| Figs, Black, 1 1/2 @ 2 1/2 |  |
| Figs, White, 2 1/2 @ 3 1/2 |  |
| Peaches, unpeeled, 4 @ 5   |  |

Prices for new crop Prunes, as named by the California Cured Fruit Association: Santa Clara, four sizes, 3c. per lb.; 40-50s, 7c.; 50-60s, 5 1/2c.; 60-70s, 3 1/2c.; 70-80s, 3 1/4c.; 80-90s, 2 1/2c.; 90-100s, 2 1/4c.; 100-120s, 2c., which is the uniform price for this grade; Sonomas, other than smallest, 1/2c. less; other districts, 1/4c. less, except for smallest; Ruby, 1/4c. premium.

Advices of recent date, coming by mail from New York, give the following review of the Eastern dried fruit market:

Since the October contracts have been filled the market for evaporated apples has ruled dull, with prices lower and in sellers' favor. Toward the close prime do not exceed 4 1/2 @ 4 3/4c. and choice and fancy are working out slowly within ranges quoted. Sun-dried apples in light supply and nominally firm. Chops held about steady at 1 1/2c., but demand light. Cores and skins receiving a fair amount of attention and firm; some recent sales were made fractionally higher than quoted. Small fruits scarce and firm, with some stock held above the higher figures quoted, especially blackberries and raspberries, the supply of which is very limited.

California fruit has continued quiet but steady at unchanged prices.

|                                                  |  |
|--------------------------------------------------|--|
| Apricots, Cal., Moorpark, 1900, 10 @ 15          |  |
| Apricots, Cal., Royal, 1900, 8 @ 9               |  |
| Peaches, Cal., unpeeled, 1900, in bxs, 7 @ 9 1/2 |  |
| Peaches, Cal., unpeeled, 1900, in bags, 7 @ 9    |  |
| Prunes, Cal., 4 @ 8 1/2                          |  |

#### RAISINS.

A large portion of the current pack, not less than two-thirds and probably more, had been already placed, but the immediate movement from the hands of packers is light. Values for Association stocks show steadiness. There are very few outside Raisins offering.

#### F. O. B. FRESNO DELIVERY.—CARLOAD LOTS.

|                                                 |  |
|-------------------------------------------------|--|
| Imperial Clusters, 6-crown, 20-lb box, 3 00 @ — |  |
| Dehesa Clusters, 5-crown, 2 50 @ —              |  |
| Peach Clusters, 4-crown, 2 00 @ —               |  |
| London Layers, 3-crown, 1 60 @ —                |  |
| do do 2-crown, 1 50 @ —                         |  |

(Usual advance for fractions.)

|                                          |  |
|------------------------------------------|--|
| Loose Muscatel, 4-crown standard, 10 @ 7 |  |
| Loose Muscatel, 3-crown, — @ 6 1/2       |  |
| Loose Muscatel, 2-crown standard, — @ 6  |  |
| Loose Muscatel, seedless, — @ 6 1/2      |  |

(Above prices for loose raisins are for 50-lb boxes.)

Thompson Seedless.—Bleached fancy, 10 @ 12c; choice, 11c; standard, 10c; prime, 9c. Unbleached, 9c.

Sultanas.—Bleached fancy, 10 @ 10 1/2c; choice, 9 1/2c; standard, 8 1/2c; prime, 8c. Unbleached, 8c.

#### CITRUS FRUITS.

Orange market has been inclining in favor of buyers, with offerings on the increase and demand only moderate. It is the exception where the Oranges now offering are sufficiently ripe to be palatable. Lemon market is dragging along at much the same low range of prices as current for several weeks past, with heavy offerings of common qualities, but choice to fancy are not plentiful. Limes are in fair supply and prices without quotable change.

|                                         |  |
|-----------------------------------------|--|
| Oranges—Navel, 2 00 @ 3 50              |  |
| Valencia, 2 00 @ 3 50                   |  |
| Seedlings, 1 25 @ 2 00                  |  |
| Grape Fruit, 2 00 @ 3 50                |  |
| Lemons—California, select, 2 25 @ 2 50  |  |
| California, good to choice, 1 50 @ 2 00 |  |
| California, common to fair, 50 @ 1 00   |  |
| Limes—Mexican, 4 00 @ 4 50              |  |
| California, small box, 50 @ 75          |  |

#### NUTS.

Quotable values for Almonds and Walnuts remain nominally as before, but there is no special demand for offerings from first hands, and the wholesale market is not firm at these figures.

|                                                  |  |
|--------------------------------------------------|--|
| California Almonds, shelled, 24 @ 27             |  |
| California Almonds, paper shell, 13 @ 15         |  |
| California Almonds, soft shell, 10 1/2 @ 12 1/2  |  |
| California Almonds, hard shell, 6 @ 7            |  |
| Walnuts, White, soft shell, 8 1/2 @ 10 1/2       |  |
| Walnuts, White, California, standard, 7 1/2 @ 10 |  |
| Chestnuts, California Italian, 6 @ 8             |  |
| Peanuts, California, fair to prime, 4 @ 5        |  |
| Peanuts, Eastern, hand-picked, 5 1/2 @ 6         |  |
| Pine Nuts, 5 @ 6                                 |  |

#### WINE.

Market for new Wine remains practically as last quoted, being quiet and steady. Dry Wine of this year's vintage is quoted at 14 @ 18c. per gallon, as to quality and section. The top figures have been realized for some very choice northern. Receipts of Wine at this port last month were 950,200 gallons, as against 922,900 gallons for October, 1899. From Jan. 1st to Nov. 1st Wine receipts at San Francisco aggregated 11,240,350 gallons, and for corresponding period in 1899 were 12,450,650 gallons.

#### MOORE, FERGUSON & CO.

#### WOOL, GRAIN, FLOUR

—AND—

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Members of the San Francisco Produce Exchange.

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#### The Orchards of the Aloha Nurseries,

together with the Orange Nursery and a Rabbitry of 28 Does,

ARE FOR SALE FOR A VERY REASONABLE AMOUNT. Or will rent the Orchard for a low cash rent and the Nursery and Rabbitry on shares.

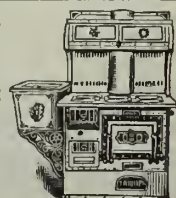
Some money is needed to successfully carry on the business, and to the right man who has unexceptional references the most favorable terms will be given. Address immediately:

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TRIUMPH STEEL RANGE into every section of the United States, we will for a short time deliver at your depot free of charge our highest grade Steel range for \$25.00. The regular retail price is \$50.00. It has six 8-inch lids. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21 1/2 inches deep, and 15-gallon reservoir. Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet. Best Range made. WM. G. WILLARD, Manufacturer, 619 N. Fourth St., St. Louis, Mo. Will ship C. O. D. with privilege of examination.



#### Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

| FOR THE WEEK.             | Since July 1, 1900. | Same time last year. |
|---------------------------|---------------------|----------------------|
| Flour, 1/4 sacks, 190,672 | 2,214,917           | 1,982,270            |
| Wheat, centals, 218,245   | 2,104,918           | 1,571,375            |
| Barley, centals, 29,119   | 2,094,826           | 3,035,300            |
| Oats, centals, 16,616     | 385,936             | 388,009              |
| Corn, centals, 4,775      | 35,280              | 44,970               |
| Rye, centals, —           | 91,922              | 76,587               |
| Beans, sacks, 85,703      | 343,308             | 216,367              |
| Potatoes, sacks, 34,184   | 594,516             | 473,859              |
| Onions, sacks, 2,897      | 102,490             | 91,926               |
| Hay, tons, 2,524          | 79,441              | 77,451               |
| Wool, bales, 618          | 17,704              | 31,197               |
| Hops, bales, 279          | 5,008               | 5,715                |

#### EXPORTS BY SEA.

| FOR THE WEEK.             | Since July 1, 1900. | Same time last year. |
|---------------------------|---------------------|----------------------|
| Flour, 1/4 sacks, 177,280 | 1,230,184           | 1,146,279            |
| Wheat, centals, 317,832   | 2,049,664           | 1,243,508            |
| Barley, centals, 5,146    | 1,315,333           | 2,277,076            |
| Oats, centals, 12         | 46,530              | 19,655               |
| Corn, centals, 20         | 20                  | 6,583                |
| Beans, sacks, 185         | 6,336               | 9,352                |
| Hay, bales, 48            | 77,937              | 41,146               |
| Wool, pounds, —           | 233,621             | 2,030,570            |
| Hops, pounds, 6,090       | 292,384             | 442,816              |
| Honey, cases, —           | 1,467               | 2,439                |
| Potatoes, packages, 4,406 | 35,602              | 26,745               |

#### California Dried Fruit at New York.

NEW YORK, Nov. 14.—Evaporated apples, common, 3 @ 4c; prime wire tray, 4 1/2 @ 5 1/2c; choice, 5 1/2 @ 6c; fancy, 6 @ 6 1/2c.

California dried fruits.—Market is quiet, with no special changes in values.

Prunes, 3 1/2 @ 8 1/2c.

Apricots, Royal, 11 @ 14c; Moorpark, 15 @ 17c.

Peaches, unpeeled, 6 @ 9c; peeled, 16 @ 20c.

#### A Useful Paste.

A correspondent gives the following recipe for a paste for use in making scrapbooks:

"I dissolve a piece of alum the size of a walnut in a pint of boiling water; to this I add a couple of tablespoonfuls of flour, made smooth in a little cold water, and a few drops of oil of cloves, letting the whole come to a boil. This paste will keep months. I put it in glass jars used for canning, or well cleaned blacking bottles. I use a half-inch bristle brush, which costs but a few pennies. This paste is handy, too, for domestic purposes. My children have many toys that come in wooden boxes, but these will break at the corners and soon come to pieces. When a box begins to give out, I take a piece of cambric or calico and with the brush and paste cover the box so that it will bear constant usage for months. Then, if the cover gives out, I pull it off and put on another one. Again, a doll's arm or leg will come off; but a piece of muslin and a bit of paste restores the article, so that it is as good as it was before."

#### Horticulturists and Vineyardists.

A man with the best of references, with thorough practical knowledge in orchards and raisin vineyards, with ten years of California experience and graduate of French Agricultural University, will take charge of a large orchard or vineyard at \$100 per month.

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**SHARPLES****Cream Separators.****1900 Dairy Separators,**

(The new Tubular are world-beaters.)

| Capacity.                     | Price. |
|-------------------------------|--------|
| Butter Cup (Tubular) 175 lbs. | \$ 50  |
| WHS Hand Sep., 300 "          | 75     |
| No. 1 Safety Hand, 325 "      | 100    |
| No. 2 Safety Hand, 500 "      | 150    |
| No. 6 Tubular Hand, 675 "     | 175    |
| No. 9 Tubular Hand, 875 "     | 225    |
| Steam Turbine, 325 "          | 125    |
| Steam Turbine, 600 "          | 200    |

**Send for New Catalogue No. 31****P. M. SHARPLES, West Chester, Pa.****THE SHARPLES CO., 28 So. Canal St. Chicago, Ill.****THE STOCK YARD.****Herefords and Shorthorns.****Two Great Sales and Show at Kansas City.**

To THE EDITOR:—At no time since the systematic breeding of the better class of cattle began in this country nearly 100 years ago was there ever marshaled the equal either in numbers or high-class individuality as were the major portion of the 800 head of Herefords and Shorthorns that were exhibited or sold at the show and sale held at Kansas City from Oct. 15th to 26th. There exists just enough rivalry or friendly spirit between the breeders of the "Whitefaces" and the "Reds and Roans" to make the best possible showing of the merits of the two breeds, which gives the prospective buyer or amateur breeder the best of opportunities to judge of their respective merits or to study how to still further improve the cattle that he may already have.

The attendance from the opening to the close was a representative one. About 5000 persons, nearly half of which were ladies, were in daily attendance. Nearly two-thirds of the States and Territories sent either exhibitors, buyers or visitors. Canada and Old Mexico were even represented.

During 1899 the American Hereford Association promoted their first show and sale, which was held at Kansas City in October. It was so interesting and successful that the American Shorthorn Breeders' Association determined to hold a similar show and sale. The two associations joined hands last November and worked harmoniously together with the one great aim in view—better beef cattle, regardless of color or breed. The citizens of Kansas City, more especially those interested in still furthering the live stock interests, took hold and helped increase the prize fund to above \$20,000. Not only this, but the Kansas City Stock Yards Company erected a new sale pavilion at a cost of \$50,000 that is pronounced by those acquainted with similar buildings to be the best of its kind in the world in which to exhibit live stock and hold public sales.

The next coming great event in live stock circles will be the show and sale at Chicago during the first week in December. All the principal beef breeds will make an exhibit, and four of them—the Shorthorns, Herefords, Aberdeen-Angus and Galloways—will hold public sales. This will afford another opportunity to judge of the merits of these different breeds of improved beef cattle.

That the reader may gain some idea of the Kansas City show and sale, the following synopsis of results is given:

The cattle sold went to fourteen States and Territories, the larger por-

tion going to new owners in Missouri and Kansas. Minnesota on the north, Texas on the south, Indiana on the east and Nevada on the west gives an idea of the extent of territory in which the cattle were distributed.

**Some Prices Realized.****HEREFORD BULLS.**

| Name of Animal—               | Price.  |
|-------------------------------|---------|
| Columbus 17th 91361.....      | \$5,050 |
| Weston Stamp 15th 108353..... | 1,030   |
| Hesiod 58th 86466.....        | 1,000   |
| Beau Donald 28th 105168.....  | 1,000   |

**HEREFORD FEMALES.**

|                         |         |
|-------------------------|---------|
| St. Justina 75131.....  | \$1,025 |
| Sophonisba 86791.....   | 905     |
| Pandora 5th 101946..... | 750     |
| Urania 86483.....       | 700     |
| Hesiod Lass 97544.....  | 700     |

**SHORTHORN BULLS.**

|                                    |         |
|------------------------------------|---------|
| Knight's Valentine 157068.....     | \$1,000 |
| 194th Duke of Wildwood 157061..... | 600     |
| Tillycain 150069.....              | 545     |
| Sempstress Valentine 157069.....   | 525     |
| 6th Victor Butterfly 140127.....   | 500     |

**SHORTHORN FEMALES.**

|                                 |        |
|---------------------------------|--------|
| Missie of Browndale.....        | \$ 950 |
| Lavender of Hill Farm 15th..... | 900    |
| Gwendoline of Meadow Lawn.....  | 660    |
| Mary of Bluff View.....         | 650    |
| Alta Victoria 2d.....           | 600    |

**General Summary.****HEREFORDS.**

|                         |             |
|-------------------------|-------------|
| 98 bulls brought.....   | \$33,290 00 |
| Average.....            | 339 69      |
| 87 females brought..... | 25,995 00   |
| Average.....            | 298 79      |
| 185 head brought.....   | 59,285 00   |
| General average.....    | 320 50      |

**SHORTHORNS.**

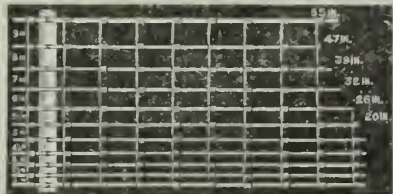
|                         |             |
|-------------------------|-------------|
| 47 bulls brought.....   | \$14,365 00 |
| Average.....            | 305 64      |
| 97 females brought..... | 31,270 00   |
| Average.....            | 322 37      |
| 144 head brought.....   | 45,635 00   |
| General average.....    | 316 90      |

**TOTAL SALE REALIZED.**

|                         |              |
|-------------------------|--------------|
| 329 head brought.....   | \$104,920 00 |
| General average of..... | 318 91       |

Kansas City. W. P. BRUSH.

[These sales were advertised in the PACIFIC RURAL PRESS and our readers will be interested in seeing the outcome. Now that the stock business is so lively and promising, our coast people ought to figure in these national events.—Ed.]

**"AMERICAN" FIELD AND HOG FENCES.**

Of "The American Field and Hog Fence," advertised elsewhere in this issue, the makers say they have marketed several millions of rods during the last twelve months. They guarantee every rod to be perfect, and this guarantee is responsible. They claim for it the following points of superiority: Special selected steel stock of their own manufacture; special galvanizing, with zinc of their own production especially for this purpose; simplicity of construction, with ample provision for expansion and contraction; hinged joint at every intersection of the horizontal wires with perpendicular stays, which prevents bending when subjected to strain—and all the above in combination, securing a fence at once cheap, durable, strong and efficient.

American fences are sold by local agents, of which nearly 15,000 are located in the various cities and towns of the United States and Canada. Any of our readers unable to find an agent in their town would do well to write for catalogue and particulars to the American Steel & Wire Co., at San Francisco, Chicago, or New York.

**REMOVAL NOTICE.**

For a long term of years the Kitzelman Bros. have advertised from and conducted their fence machines and woven wire fence business at Ridgeville, Ind. They have just removed to Muncie, Ind., where they have completed a large, modern, up-to-date factory and installed much new machinery for the manufacture of all kinds of farm, lawn, cemetery, park and ornamental fence. With characteristic thoroughness, Kitzelman Bros. have used only brick and iron in the construction of the buildings composing their new plant.

**THE NEW EGG FARM.**

By H. H. STODDARD.

A practical, reliable manual upon producing eggs and poultry for market as a profitable business enterprise, either by itself or connected with other branches of agriculture. It tells all about how to feed and manage, how to breed and select, incubators and brooders, its labor-saving devices, etc. 12mo., 331 pp., 140 original illustrations, cloth. Price, \$1 postpaid.

**PACIFIC RURAL PRESS,**  
330 MARKET ST., SAN FRANCISCO, CAL.

In every town and village may be had, the

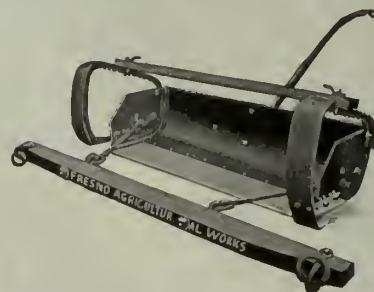
## Mica Axle Grease

that makes your horses glad.

Made by Standard Oil Co.

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3 1/2-4-5 Foot.

**FRESNO AGRICULTURAL WORKS, FRESNO, CALIFORNIA.**

Telephone Main 199.

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BLAKE McFALL & CO., Portland, Or.

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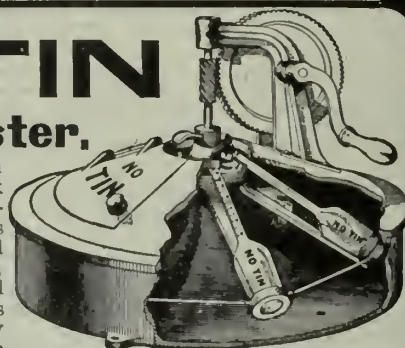
**THE LIVE STOCK AND DAIRY EXHIBIT WILL ASTONISH YOU.****DON'T FAIL TO SEE THIS FAIR.**

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## NO-TIN Babcock Tester.

Since every up-to-date dairyman and owner of cows uses a milk tester, not only for his herd record, but also to assist him in his breeding operations, he should use one which is easy to operate, which is reliable and which will last indefinitely. This one, as its name indicates, is made entirely of cast iron, bronze and steel. Tin is discarded entirely as being too light and rusting out too quickly from contact with the acid in event of breakage, &c. We make these in sizes holding 4, 6, 8, 1 and 12 bottles. All the gears are cut from phosphor bronze and are strong, noiseless and easy to turn. It is high-gear; one turn of the handle makes many revolutions of the test. Remember—there is no tin used in constructing this test. Our shops repair all kinds of separators and dairy and creamery machinery promptly. Send for free catalogue No. 70

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De Laval "Alpha" and "Baby" Separators.  
First—Best—Cheapest. All Styles—Sizes.  
Prices \$50. to \$800.—  
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## GLENN RANCH,

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In Subdivisions.

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This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

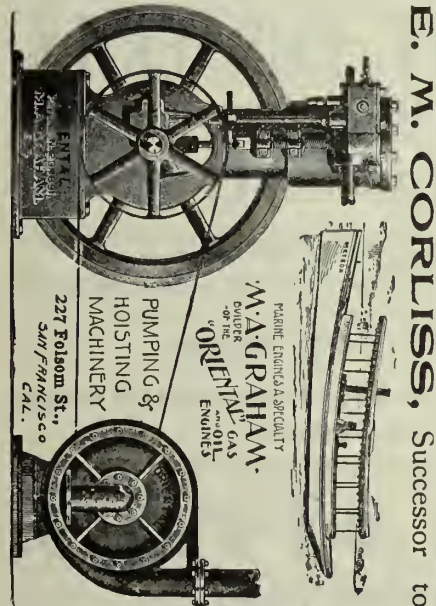
The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

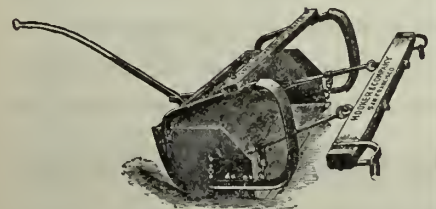
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Assaying of Ores, \$25; Bullion and Chlorination  
Assay, \$25; Blowpipe Assay, \$10. Full course of  
assaying, \$50. Established 1864. Send for Circular.

## South American Fertilizers.

The following data on the mining and commercial importance of South American phosphates and nitrates, recently published in the Rural New Yorker, will be found interesting and instructive:

Since the wonderful discovery of Georges Ville great things have been accomplished in agriculture and the employment of chemical fertilizers has become general throughout the entire world. Three elements combine in forming a complete fertilizer and each part is more or less useful, according to the nature of the crop. These three elements are phosphoric acid (in the form of superphosphates of lime), potash and nitrogen, particularly in the form of nitrates, or nitrate of soda. The last named chemical is considered the most important, as well for market garden plants and grain as for vineyards.

Almost all nitrate of soda comes from Chili, where immense deposits of the precious mineral are found. The nitrate is found in an arid zone of Chilean territory lying between the Andes and the Pacific ocean. This region is completely denuded of vegetation and of frightful aridity, and sometimes several years elapse without a fall of rain to moisten the soil. This explains why this raw nitrate, called "caliche," has been able to exist for centuries, close to the surface of the earth. The "caliche" extends itself to the surface of the soil, covered only by a bed of sand and common salt, in a stratified siliceous alluvium, which gives to the country the denuded aspect of a barren region enveloped in a mold of snow. The raw nitrate varies in thickness from several thumb lengths to 10 feet, and is covered by a deposit attaining perhaps the depth of 12 feet. The formation of these beds of nitrate is attributed to the decomposition and gradual nitrification of antediluvian vegetable and animal matter, cast up by the sea and left there by the retreating waters of the floods.

The quality of the caliche is very different according to the depth of the beds which are explored. The average richness of the raw material which has been worked is: For the best quality, from 40% to 50% of nitrate of soda, and upward. For the medium quality, from 30% to 40%. For the inferior quality, from 17% to 30%. Most of the earthy impurities which are contained in caliche are insoluble in water, such as the debris of rocks, sand and clay. It also contains in variable quantities (10% to 60%) of sodium-cooking salt—followed in order by potassium, sulphate of sodium, sulphate of lime, magnesia salts, nitrate of potassium, a little iodide of potassium and sometimes salts of boric acid.

The province of Tarapaca is the center of operations of these mines of nitrate of soda. Among the richest are those of Antofagasta and those of Atacama. The treatment is simple: The mining of the caliche is done under the clear sky by opening trenches; wagons or carts transport it to the factory where the mineral is crushed, then thrown into caldrons, where the nitrate of soda is dissolved at a high temperature. When the solution arrives at the desired point of concentration it is decanted, to separate insoluble impurities and to crystallize the liquid by cooling and evaporation.

The nitrate thus obtained is of great purity. This is its composition: 95% nitrate of soda; 2% common cooking salt; 6% sulphates; 1% of insoluble matter; 2.3% of moisture.

In 1830 nitrate was employed only in chemical industries, and the production attained a volume of only 800 tons, increasing to 10,000 tons in 1840, and 22,800 tons in 1850. In 1860 it attained to 55,200 tons, then 136,287 tons in 1870, and 222,559 in 1880. It was at this juncture that the application of nitrate of soda to agriculture was begun, and the upward leap in the output is tremendous. The production in 1890 reached the figure of 1,050,119 tons, and at last, in 1899, that of 1,380,000. Another piece of statistics shows the commerce developed by the principal States trading with Chili, and gives, as actual importation, 501,090 tons for Germany, 261,780 for France, 155,000 for the United States, 153,570 for Belgium, 125,870 for England, 89,830 for Holland and so forth.

It is a curious fact that while the area cultivated in Germany is hardly equal to that devoted to the same crops in France, the consumption of nitrate of soda in Germany is almost double that of France. It is therefore a lesson which it will be well to remember, and which proves that in the matter of intensive agriculture we are not as progressive as our powerful neighbor.

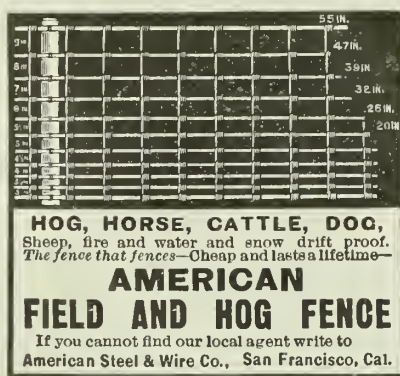
The fertilizers above referred to are handled extensively in California by the well-known firm of Balfour, Guthrie & Co.

**COE'S ECZEMA CURE \$1** Large sample mailed free. Coe Chem. Co., Cleveland, O.

## Soiling Crops and the Silo.

This is a new book by Prof. Thomas Shaw and forms a most appropriate companion to his Forage Crops, published last year. It is by far the most original and complete work ever written on the subject of which it treats. The book is divided into two parts, the first of which treats of the growing and feeding of all kinds of soiling crops that have been found useful in any part of the United States or Canada. The discussion is simple, clear and eminently practical. It treats of the climatic and soil conditions to which all these crops are adapted, of their plan in the rotation, of preparing the land for each crop and of sowing, cultivating and feeding the same.

The second part discusses the silo. No treatise on the subject has ever appeared that will approach in simplicity and comprehensiveness the way in which it has been handled by the author. It is not a plea for the silo, as nearly all the publications have been that have heretofore appeared on the subject, but a sensible discussion of the place for the silo, the benefits from soiling crops, the best methods of building the silo, the crops that are suitable for soiling, filling the silo and feeding the silage. The book will be furnished postpaid for \$1.50 by the **PACIFIC RURAL PRESS.**



**HOG, HORSE, CATTLE, DOG,**  
Sheep, fire and water and snow drift proof.  
The fence that fences—Cheap and lasts a lifetime—  
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**FIELD AND HOG FENCE**  
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"Greenbank" Powdered Caustic Soda and Pure Potash.

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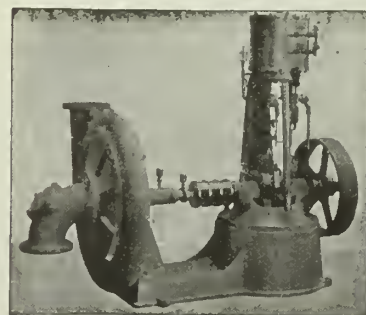
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**WITHOUT IRRIGATION.**

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## THE VETERINARIAN.

Answers by Dr. Creely.

## CHICKEN LICE.

TO THE EDITOR:—I should like to hear Dr. Creely's opinion on the following symptoms: I have a horse that for some time past has been suffering from an intolerable itch, principally in the mane and tail. As the chickens have access to the stable I treated him for lice, sponging him down three or four times with kerosene emulsion, but still the animal scratches, and the mane especially was very scurfy, though that symptom is a little better now. His appetite is good and he has a good winter coat on. I am giving him Dr. Cady's condition powders.—SUBSCRIBER, Alma.

The trouble is from chicken lice. Unless you can keep them down you must get rid of your chickens or your horse. There is no use in treating the horse unless you rectify the surroundings. Apply once daily: Creoline, 4 oz.; whale oil, 12 oz.; oil rosemary, 1 oz.; mix. DR. E. J. CREELY.

510 Golden Gate avenue.

## Kansas City Show.

The special prizes of \$50 each offered by the Pasteur Vaccine Company for the best Hereford calf and for the best Shorthorn calf in the show were won by T. F. B. Sotham of Chillicothe, Mo., with his Hereford calf, "Thickflesh," and by George Bothwell of Nettleton, Mo., with his Shorthorn calf, "Nonpareil of Clover Blossom." The Pasteur Vaccine Company is very well known among cattle raisers throughout the country on account of its celebrated black leg vaccines. The Pasteur Company introduced black leg vaccination in 1895, and since that time over 2,000,000 calves have been successfully treated in the United States and Canada with Pasteur vaccine, which is the original and genuine article. The company is just issuing some fresh literature, which will be mailed upon application to its head office in Chicago or to any of its branch offices or general agencies.

## Seeds, Plants, Etc.

MORRIS RED Apple,

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CLIMAX Plum,

CLYMAN Gooseberry,

PHILLIPS CLING Peach,

MUIR Peach in

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A GENERAL  
ASSORTMENT  
OF  
NURSERY  
STOCK.SEND FOR  
PRICE LIST.

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T. J. TRUE, Proprietor.....Forestville, Cal.

Every horticulturist should have my 28-page illustrated catalogue which tells all about

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The old sorts and the tested new sorts; also tables for planting trees, sowing seed, etc. Remember, I send this valuable book Free! Your address on a postal card brings one.

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APPLES, PEARS, PEACHES,  
PLUMS, PRUNES, CHERRIES,  
APRICOTS, ETC.

MY STOCK IS EXTRA FINE THIS YEAR.

Send for Prices!

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FOR SALE.

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ONE YEAR OLD, THREE TO FOUR FEET:

Sellers Cling, McDevitt Cling, Nicholls Orange Cling, Tuscan, Levy, Early Triumph.

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SATSUMA or OONSHIU  
ORANGES

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G. L. Taber, Prop.

GLEN ST. MARY, FLORIDA.

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First-class, 3-16 inch and up, straights.  
Second class, 2-16 to 3-16 inch, straights.  
Branched, 3-16 inch and up.  
These Seedlings are equal to any on the market, and offered at reasonable prices. We also have a large stock of Root Grafts. Address  
F. S. PHOENIX, Bloomington, Ill.

California :.  
:Vegetables  
IN...  
Garden and Field.

By PROF. E. J. WICKSON.

Published by "Pacific Rural Press" of San Francisco.

A Practical Guide to Success in California.  
Large 8vo., fully illustrated.  
PRICE \$2. Orders received at this office.

## THE RAISIN INDUSTRY.

By GUSTAV EISEN.

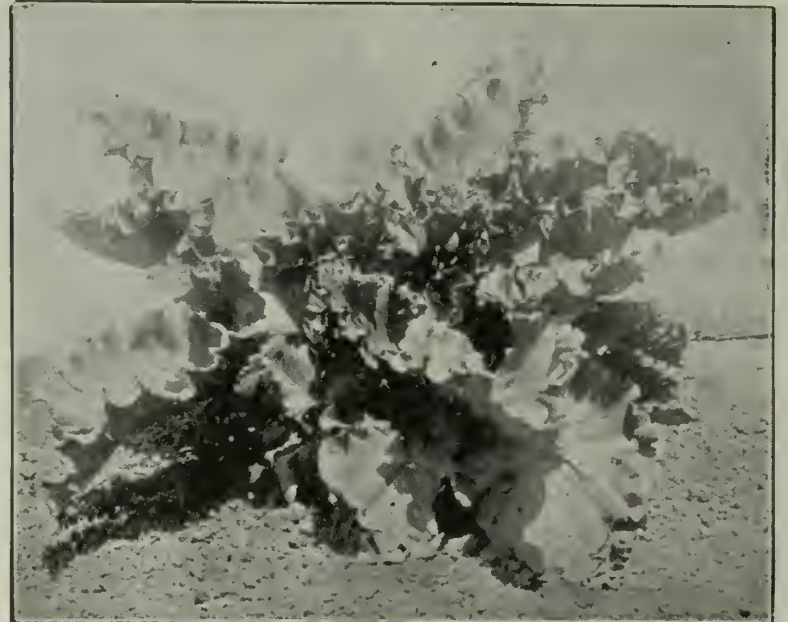
A Practical Treatise on Raisin Grapes,  
Their History, Culture and Curing.

This is the Standard Work on the Raisin Industry in California. It has been approved by Prof. Hilgard, Prof. Wickson, Mr. Chas. A. Wetmore and a multitude of Practical Raisin Growers.

Sold only by THE DEWEY PUBLISHING CO., or its agents at the uniform price of \$3.00, postage prepaid. Orders should be addressed:

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## Deciduous and Citrus Trees and Ornamentals.

Large Stock of Royal Apricot; Grafted Walnut; Yellow Newtown Pippin, Yellow Bellefleur and W. W. Pearmain Apples.

Fine Trees of Washington Navel, Thompson's Improved Navel and Valencia Late Oranges.

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The third edition of this great work and indispensable companion of progressive fruit growers is now ready for immediate delivery.  
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THE NEWEST THING IN HORTICULTURAL ART.

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Address GEO. C. ROEDING, Prop. Fancher Creek Nurseries,  
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This Mandolin has 7 walnut and maple ribs, inlaid between rosewood finger-board, and all the latest improvements. Our Price \$1.75. Retail Price \$3.50. We sell everything in Musical Instruments from a Jew's harp to a Piano at wholesale prices to the consumer. Our Big Catalogue No. 99 quotes over 150,000 bargains like the above and saves you from 25% to 75% on Everything to Eat, Use and Wear—it has over 13,000 different illustrations and each copy costs \$1.25 to print and mail. For 10c. we will send this book to you and you deduct these 10c. from your first order of \$1. Address this way JULIUS HINES & SON, Baltimore, Md. Dept 43

**Patrons of Husbandry.****National Grange in Session.**

WASHINGTON, Nov. 14.—The thirty-fourth annual session of the National Grange, Patrons of Husbandry, began here to-day with a good attendance and will continue for a week or more. The chief feature of interest to-day was the annual address of Worthy Master Aaron Jones of Indiana, who said that in most of the States the Order had enjoyed great prosperity during the year. Never had the conditions been more favorable for the extension of the Order than now. While agricultural conditions are somewhat improved over what they were a few years ago, they are not what they should be, said Mr. Jones. The prices of articles farmers buy are too high compared with those of what they had to sell, and such remedial action should be had as would cause an equitable adjustment of prices in all the leading staples.

He urged opposition to the ship subsidy bill, and spoke of the growth of industrial combination "until the entire country is justly alarmed." He urged an amendment to the Constitution, clear and expressive in its terms, empowering Congress with the right and authority to regulate corporations. The interstate commerce law, the Grand Master argued, should be amended so that all sections of the country could secure fair and equitable freight rates. This being secured, the hardest blow that at this time could be struck to monopolies and trusts, and the greatest encouragements to enterprise and thrift, would be given.

The report of the Secretary, Dr. John Trimble of Washington, showed that 182 new Granges had been chartered during the year—the Order now numbering over 500,000 members.

**List of U. S. Patents for Pacific Coast Inventors.**

REPORTED BY DEWEY, STRONG & CO.,  
PIONEER PATENT SOLICITORS  
FOR PACIFIC COAST.

FOR WEEK ENDING OCTOBER 30, 1900.

- 660,807.—GATE—H. Alten, Sebastopol, Cal.  
660,612.—WEED DESTROYER—M. J. Anderson, Defur, Or.  
660,715.—BREASTWORK—R. S. Anderson, Tacoma, Wash.  
660,839.—WEATHER STRIP—J. E. Bundy, S. F.  
660,947.—BURIAL APPARATUS—J. Carhart, Campbell, Cal.  
660,890.—PLANTER—J. C. Colby, Visalia, Cal.  
660,844.—GOLD SAVING APPARATUS—W. E. Darrow, Sonora, Cal.  
660,789.—HYDRAULIC NOZZLE—W. A. Doble, S. F.  
660,632.—BAND CUTTER—T. Elliott, Dallas, Or.  
660,895.—TRUSS—J. Fandrey, Los Angeles, Cal.  
660,794.—WEIGHING SCALE—Hanek & Hoepner, S. F.  
660,957.—FOOT WARMER—Helena Hermans, Tacoma, Wash.  
660,645.—TRACK BRAKE—Lowe & Meighan, S. F.  
660,967.—NAIL—J. G. McGaughey, Spokane, Wash.  
660,709.—FRUIT CLIPPER—N. B. McGhee, Orange, Cal.  
660,734.—PIPE WRENCH—Nordham & Bramlette, Downey, Cal.  
660,922.—DRAG SAW—J. H. Perkins, Seattle, Wash.  
660,736.—LOCK—B. Phelps, Seattle, Wash.  
661,022.—BICYCLE BRAKE—H. E. Pringle, Redlands, Cal.  
33,475.—DESIGN—G. T. Willis, Fresno, Cal.

**Notices of Recent Patents.**

Among the patents recently obtained through Dewey, Strong & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

**GOPHER TRAP.**—No. 659,932. Oct. 16, 1900. Z. A. Macabee, Los Gatos, Cal. The object of this invention is to provide an improved trap for catching gophers and similar burrowing animals. It consists essentially of a spring frame having transverse pointed interlocking arms at one end, loops through which these arms pass, and which when the trap is set by depressing the upper portion will separate the interlocking arms. A plate is fulcrumed upon the framework and a trigger engaging the plate holds the arms separated when the trap is set. The trap is then pushed into the hole so that the plate is in such position that when the gopher pushes out the dirt, as is his custom, it contacts with the plate and disengages the latch, thus allowing the arms which are operated by a stout spring to close together and impale the animal.

**CHECK HOOK.**—No. 659,611. Oct. 9, 1900. F. G. Snook, Sacramento, Cal. This invention relates to a new and improved harness check hook or device for holding check reins in position. It comprises a post having at its upper portion a transverse slot or opening with a notch forming a depressed sheet, a continuation of the upper wall thereof and a ring or loop pivotally mounted to the base of the post and composed of spring material, said ring or loop adapted to be passed into the slot, and thus prevent the check rein which is fitted on the post from slipping off. The rein is easily released by disengaging the ring and turning it backward, leaving the upper part of the post clear for the release of the check rein.

**RECEPTACLE FOR PACKING FRUIT.**—No. 659,949. Oct. 16, 1900. C. W. Arrasmith, Courtland, Cal. This invention is designed to provide a means for packing fresh fruit rapidly into baskets, or similar receptacles, and to provide for a suitable convexity or crown to the surface of the fruit. It consists of a baseboard having a concaved depression and means for supporting the basket inverted over this depression. The bottom of the basket being opened, fruit is filled into it from the bottom, and when full a flexible covering or bottom is placed upon it and pasted or otherwise sealed upon the sides of the basket which is then inverted so as to be right side up when removed. The basket is held in place by spring-pressed arms which retain it while being filled, and which are disengaged to allow the basket to be released. When the basket is removed the baseboard and the basket are turned together so that the latter is in its proper upright position.

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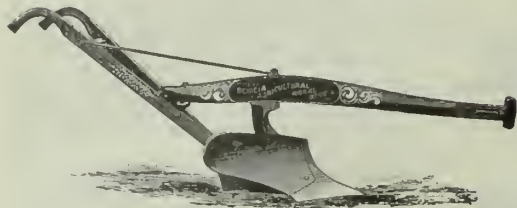
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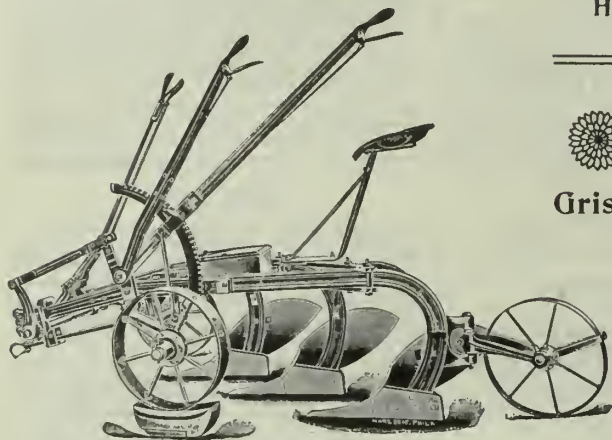




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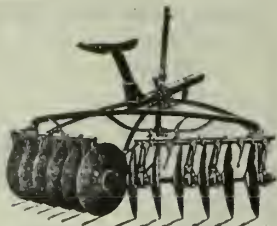
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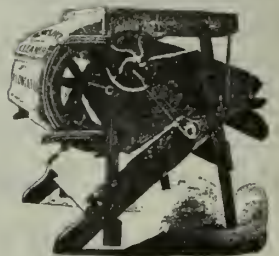
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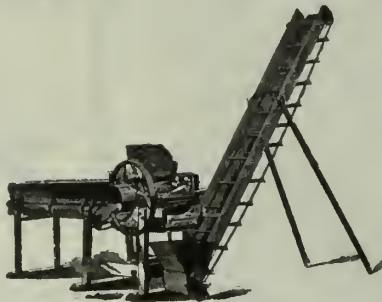
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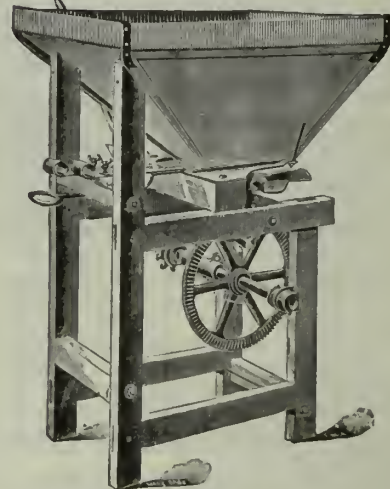
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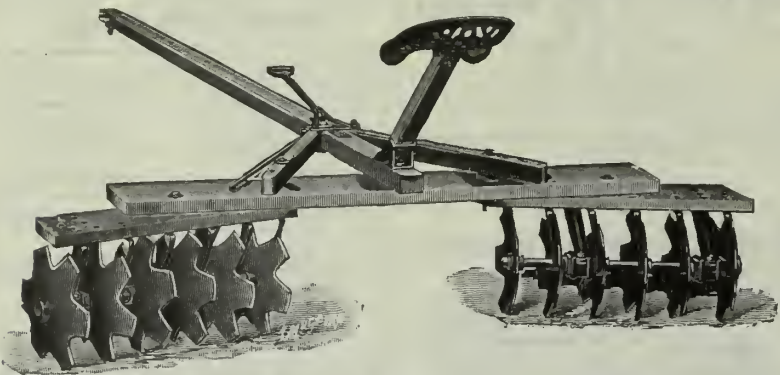
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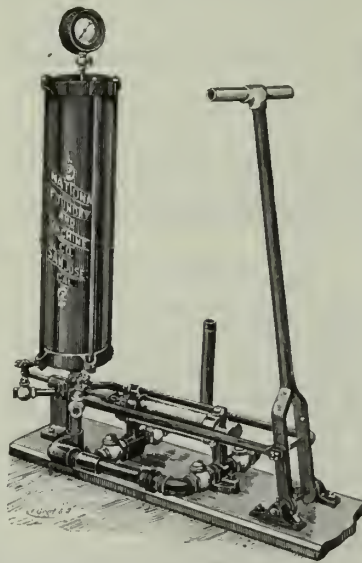
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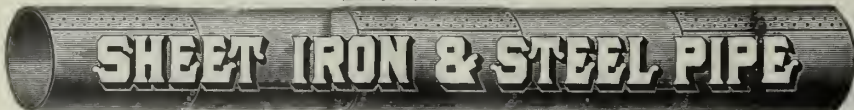
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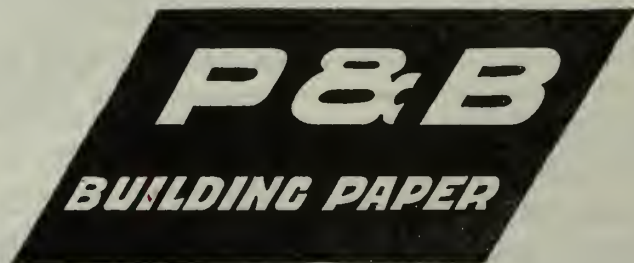
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 21.

SAN FRANCISCO, SATURDAY, NOVEMBER 24, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

### The Pomelo in California.

The pomelos are among the most showy citrus fruits. Their size and color, coupled with the habit of the species to grow in large clusters, constitutes them display articles par excellence, and we choose them to decorate our first page in honor of the great San Joaquin Valley Citrus Fair, which will be held in Tulare next week, as our readers already know. The pomelo has excited much interest among our citrus fruit growers during the last few years, and it is not the fault of the fruit perhaps that results with it have not justified expectations. It has grown as

well as it could and fruited very liberally, and could be had in trainloads if the enervated people at the East would take their tonic bitters in our style of pomelo. It has been reported, however, that our style is not so acceptable as that which Florida furnished them before the freeze of 1895; and whether there is a clear difference, or whether the change of supply gave the Eastern people a chance to escape from a fad of which they wearied, we do not surely know. However this may be, though many pomelos have been grafted over to Washington Navel, there are some growers who still expect to reap profit from the fruit, and we hope they may. In his citrus treatise, Mr. B. M. Lelong of the State Board of Horticulture has wisely given due attention to the pomelo and has illustrated and described varieties which are prominent in southern California. His pictures are reproduced on this page. His account of varieties is predicated upon a comparative test of varieties made some time ago at the South, and in that test the Duarte, a Florida seedling, was held to be best. Next to it was the Colton Terrace Seedling, of which a picture is given herewith, and the Triumph, of which a cross section is given, came third in rank. Other varieties figured by Mr. Lelong are Walters, a small variety; Aurantium, so called from its resemblance to an orange, which is in fact too much like an orange to be a good pomelo. The Pernambuco pomelo presumably explains itself by its name. These are, however, only a few of the varieties now to be found in California. Some others have been discarded; others, of Florida seed, may have a future.



The Pernambuco Pomelo—Half Natural Size



Aurantium Pomelo—Slightly Reduced.



Walters Pomelo.



Colton Terrace Seedling Pomelo.



The Triumph Pomelo.



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E. J. WICKSON..... Horticultural Editor.

San Francisco, November 24, 1900.

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## The Week.

About all you need to do to stir up the California weather is to intimate that it is not going quite right. We indulged in a little repining last week and suggested that showers and rainbows were not the proper winter form. The consequence has been a weather display embracing nearly all the attractions in the meteorological repertory from a sunrise rainbow to a midnight sou'wester, and a soaking of the soil through the whole length and breadth of the State, which leaves nothing more to be immediately needed in that line. It has been a fine affair and will be of incalculable value to the State. The table prepared by the Weather Bureau, on another page, shows how generous the storm has been almost everywhere. The delights of the affair can be better imagined than described. The results will be the greatest activity everywhere. Coming thus early the storm bids fair to reflect the year's character. It is not unreasonable to expect that the first year of the new century will be the greatest California has experienced thus far.

The rainstorms have had their usual effect upon the course of trade. They have caused weakness all along the cereal line by creating the impression that larger crops would come, and they have strengthened the feeling through other produce lines by checking shipments and reducing visible supplies. Most of the changes in this week's markets can be traced to one or the other of these influences. Wheat advanced a little since our last report, but then sagged back again, closing to-day about the same as a week ago. Only one grain cargo has gone out, and that one chiefly barley. Barley is easier in tone and so are oats, but there are no changes in price. Hay is quiet and weak, but not lower, and is expected to brighten up with the weather. It looks as though all the hay in reach would be wanted. Millstuffs are steady and unchanged. Beef is higher and very firm with reduced receipts; mutton and hogs are steady and unchanged, receipts of the latter coming now from Utah and Oregon. Butter is in better shape for the best lines and so are eggs. Consumption has increased by the recent decline, and receipts being now lessened, give a stronger feeling. Cheese is steady. Poultry is in light receipt, and good demand especially for large, young fowls. Turkeys are in fair receipt and moderate prices this week, and buyers are stocking up for Thanksgiving. It looks as though there would be a good trade for good stock. Potatoes are dragging, but onions are stiff and higher. The bean market is in better tone and unchanged, stocks being firmly held. Dried peas are

in request. Fancy apples are firm and choice are a little more abundant. There are too many green oranges still; they do not go well in sloppy weather. Lemons are also slow. Dried fruits are quiet and jobbers are selling from what they already have. Much activity is not looked for until the holidays pass. Raisins are of healthy tone because poor stock is being held back. Sultanas and Thompsons are out of sight. There is little doing in wool. The general market is depressed by failures at the East, but local prices are not changed and buyers are taking hold in a moderate way. Hops are quoted high, but jobbers are not doing much.

## Citrus Fruit Growing and Citrus Fairs.

The citrus fruit interests of California have gone forward with less doubt and hesitation and embarrassment than any other single agricultural enterprise of the State. It is true of course that there has been at times apprehension that we might speedily reach overproduction: it is true also that one escape therefrom has been found in the protective policy of the Government, but for such ends was this policy designed and the demonstration of its success is a reasonable guaranty that it will be maintained as long as may be necessary. There has in fact in the last quarter of a century appeared no menace or obstacle which has not yielded to the effort and influence of the growers in the promotion of their own industry and there is no reason to apprehend that any obstacle will arise which cannot be cleared in the same way. The product of the year, which closed with the opening of the current month, reached a total value of something like eight million dollars in Eastern markets and with the present outlook the coming crop may reach a value of nearly ten millions. This will be about one-quarter of the total value of California fruits and fruit products of every kind and description.

This is a great value to develop in two decades, for before that there was small total value, although citrus fruit had been grown in California for a century or more. Not only is the total great in itself but it is great also in the gain of population, in invested wealth, in horticultural wisdom and in the co-operative spirit which it has engendered. The fact that now this same agency for the upbuilding of the State is as wide awake and forceful as it has been at any time during the period of its beneficent work, we count of great significance and moment. It is operating now also under more favorable auspices than formerly. There is far less danger of mistake in planting and far greater assurances that preparation for sale and distribution will be in the interest of the product and the producers. There is fuller demonstration that the fruit is acceptable to the distant millions whose money it must win for California. The consuming capacity of the United States for citrus fruits is proving even greater than the most optimistic grower dared to hope two decades ago. Not only is the growth of the country in population providing a larger consuming class, but the wider distribution of a fine fruit with marked keeping quality, is constituting it not a mere luxury for the rich man's sideboard or the poor man's holiday, but a staple fruit for all people during a large part of the year. While other fruits assert themselves for their short seasons, the orange and the apple are the enduring favorites to which all tastes turn when the appetite cloy with the abundance of other fruits. To us the outlook for these kings of the citrus and deciduous fruits seems brighter than ever.

Another consideration which has but recently risen to appreciation is the advantage of the orange as an all-the-year fruit from California. This is realized in southern California in the exceedingly high values obtained for a first-class late variety like the Valencia. With the Navel, from December onward, until a few other varieties take up its closing paces in springtime and the Valencia undertakes the summer and fall burden, there has come to be almost a year of oranges even at the south. Still, there remains the very profitable opportunity for the earlier ripening oranges of the valleys and foothills north of Tehachapi, to pass into waiting markets without conflict with the southern product. Thus the two parts of the State are complementary and can make a united effort upon the distant markets without local conflict. This is a very fortunate fact, in view of the

present disposition to increase orange planting in the northern extensions of the citrus belts of California. There seems good reason to hold that considerable increase in the planting of oranges can be made with a good promise of profit if due regard is had for suitable soils, exposures, temperatures and water supply. It will not do to surmise that, because conditions do not favor other fruits, the orange should be planted. Though the orange is a hardy tree and will endure some extremes in soil and air, it must not be concluded that it will be profitable when forced to endure them. In the calculations for profit, the orange planter should seek diligently for the best; for decoration of home or park something less may be accepted by the planter and the tree.

The citrus fruit fair which will be held in Tulare next week is an affair of much import to the intending planter of oranges in the central and northern parts of the State. There will be much to be learned by observation of the fruit and conference with the exhibitors. Of the latter southern California has furnished many experienced men and women for the development of more northerly citrus interests. They sold out to advantage at the south and they bring their experience to proceed upon in the newer regions. The fact that the Tulare fair commands the co-operative interest of nine counties of the San Joaquin promises that exhibits will come from a long distance along the Sierra foothills. We hope also that the Sacramento valley growers will enrich the occasion with their presence and their displays.

The citrus fair is a most effective agency for the promotion of the citrus interests. We shall never forget the materials and the spirit manifested at the great citrus fairs during the first decade of the upbuilding of southern California. They were the bloom of southern enterprise from which has come the grand industrial fruit of the current years. They could not be reproduced in all their enthusiasm and honest pride of wonderful performance. The south is of age in citrus culture and life is real and earnest. In the newer citrus regions of the north there is to be reproduced the glad surprise, the roseate dawn of hope, the confident strength of the first determination along citrus lines of which we so greatly enjoyed the sight in the southern colonies twenty years ago. Let the State go to Tulare to see such things next week. There is great promise in them. There is inspiration for all progressive work. Though a man or woman may never plant an orange, it will be pleasurable and profitable to attend this fair. It will give confidence and stimulation for eager action in all lines of honorable and progressive work.

THE telegraph dispatch from Atlanta, Ga., to the effect that the State Entomologist had burned 30,000 trees shipped into the State from Tennessee because they were infected with San Jose scale, justifies a word of advice to our nursery readers. We do not suppose they would ship any San Jose scale, but even to get clean trees or plants into Georgia it is necessary that the stock should be officially inspected here before shipment, and notification sent to the State Entomologist at Atlanta, who will then send official tags under which alone the railways will take the consignments into the State. Georgia proposes to maintain a wall of exclusion against introduction of more pests. It is interesting to note that the Eastern States are following California in insect exclusion. A few years ago California was roundly berated for interfering with inter-State trade, and it was also said to be because our nurserymen wished to prevent competition. It is impossible to say how many evil things have been kept out of California by our vigilant quarantine officer and his assistants.

SKUNK farming is not a new thing. We saw long ago accounts of skunk farming for furs in some Eastern States, and the Pacific coast does not propose to be behind anything, not even skunks. It is telegraphed from Tacoma that W. R. Forbes, a Scotchman, is trying to buy skunks enough with which to start a farm. He has already several martens, and now wants skunks of the largest variety to be had, and will pay a good price for them. We have no skunks for sale, but we have one to give away. It used up a dozen chickens in two or three nights, and, when we caught sight of it, it looked as big as a St. Bernard dog. Probably that's the kind this new skunk rancher wants to get.



QUERIES AND REPLIES.

Millipedes in Carnation Roots.

TO THE EDITOR:—I have a large collection of carnations; but lately they have commenced to die, and, on digging them up, I find them like a dry rot and full of little worms. I send you a piece of the root and some of the worms. I have used ashes, and also soap-suds, but they do not seem to do any good. Please tell me what to do through the PACIFIC RURAL PRESS.—GEORGE HOGAN, Lodi.

The roots are being eaten by millipedes of one of the smaller species. These worms are cylindrical, slow in movement and have so many legs that one of their names is Thousand-legged worms, though that is a very liberal estimate of their locomotors. The more flat and active worms of the same group, with fewer leggs, are called centipedes, and these are the ones which are commonly charged with being venomous. The specimens sent belong to the group Julidae of which there is one species nearly as large as a lead-pencil and as long as one's little finger. This group, both in large or small species, is vegetable-eating and sometimes quite injurious in gardens. Perhaps the best household remedy is soot from the chimney or stovepipe, either sprinkled on the ground at this season, to be carried into the soil with the rain, or stirred into water, allowed to stand over night and the extract poured at the root of the plant. Nitrate of soda or potash, one ounce to a gallon of water, used in the same way, will also probably discourage these worms.

Disinfecting Cuttings.

TO THE EDITOR:—Is there any disinfectant for grape cuttings to rid them of phylloxera before planting, or do the cuttings contain it when taken from an infected vineyard? How long could a person reasonably expect vines to stand on good soil with no other vines within a mile?—GROWER, Solano County.

Vine cuttings are not likely to carry phylloxera because the insect in this State is largely restricted to the root form and is very rarely on the leaves. Place them in a tight tank, barrel or box, place on top of them a saucer full of carbon bisulphide, such as is used in killing squirrels, and cover tightly with sacks or canvas and keep tight for forty minutes. The bisulphide will vaporize readily and the gas will destroy any life there may be present. Do not allow any light around the vapor, for it is inflammable. No one can tell how soon or late the phylloxera may reach your plantation.

Not the Codlin Moth.

TO THE EDITOR:—Is the moth enclosed the codlin moth, and is a spraying of Paris green effective for it? Also, is there any danger of poisoning while spraying trees?—MRS. M. GILBERT, Kernville.

The moth is not the codlin moth. It is one of the cutworm moths and is several times as large as the codlin moth. If you have wormy apples you will find the codlin moth in the fruit room or fruit house next spring. They are not visible at this time of the year except when some fool worm loses his almanac and comes out at the wrong time. The Paris green treatment is safe. It has been freely used for years and has never hurt anything but the worms and the trees. If you get good Paris green you can kill the worms without injury to the leaves. Unless you understand the method of using write to the Agricultural Department of the University at Berkeley for a pamphlet on Paris green.

Almond on Mikado and Clyman.

TO THE EDITOR:—Can the almond be successfully grafted on the Mikado and Clyman plums?—GROWER, Yolo County.

The Mikado is a synonym of Abundance. What can readers tell us then of almond grafts on Abundance and Clyman? We have had no experience with such grafting. Quite a number who have not done well with early shipping plums desire to work them over and we would like to publish all the facts we can get along this line.

Olive Pruning.

TO THE EDITOR:—Should the olive tree have a closed center or an open center in the interior valleys? Will a closed center give more olives in the Sacramento valley?—GROWER, Tehama county.

The olive in the interior heat should have shade for its interior arrangements, though undoubtedly the

trees are often allowed to become too dense in the top growth. We hold that there should be a thinning of surplus shoots, so that dense shadow is avoided, but at the same time the interior should be screened from direct sunlight. As a rule, the olive tree is not sufficiently pruned, both in shortening and in thinning of shoots which follow the cutting back.

Pollination.

TO THE EDITOR:—Do peaches, pears, prunes, almonds and olives need association of different varieties for cross pollination or do any of them require it?—READER, Corning.

There is abundant testimony that the first three fruits named above bear well in solid blocks of one variety in California. The Bartlett, reported at the East as a self-sterile variety, does not appear to be so in this State. Almonds are clearly benefited by association of varieties. There have been some experiments showing that olives are benefited by such association, but the matter is not fully demonstrated. Certainly the Mission variety needs no other and had no other during the first hundred years of its life in California.

Fertilizers for Fruit Trees.

TO THE EDITOR:—Is Thomas phosphate powder as good as any for fruit trees? When is nitrate of soda to be used for them?—READER, Corning.

Thomas phosphate powder is a very good material to convey phosphoric acid to fruit trees. It is slowly soluble and can therefore be safely applied with the first winter plowing. Nitrate of soda is valuable as a nitrogen supply and is a very effective stimulant of wood growth and better foliage for orchards which have been bearing heavily. It is very soluble and should not be applied until the heavy rains are over. The month depends, of course, much upon the local climate. In most cases, however, March is a good month for the interior and April for the coast in the upper part of the State.

Apple and Pear Canker.

TO THE EDITOR:—Has "apple canker" manifested itself in any of the apple or pear orchards in the coast or interior valley orchards to your knowledge? A bulletin—No. 163—issued by the Geneva Experiment Station, New York, discusses it and considers it formidable, as it attacks both wood and fruit. It would be well for Californians to look out for this new enemy. Nursery stock should be rigidly inspected, to the end that it may be promptly eradicated if it appears.—PRIMAVERA, Toll House.

We are unaware of the presence of this disease in California, though of course it may be installed somewhere. We believe its presence has been demonstrated in Oregon. We have in this State, on pears, the "crater blight," which is held by some to be another name for canker, but it seems to us different.

Muscat Yield—Eggs on Rose Twig.

TO THE EDITOR:—In your reproduction from Sanger Herald allow me to correct one statement. The Muscat vine has produced forty-six pounds of raisins as good as any in market. This weight of grapes making a little more than two trays is not unusual. Please find herewith slip of rosebush. What is it?—THOMAS YOST, Kings River.

We are glad to have the vine yield correctly given. The eggs on the rose twig are those of the katydid—one of the grasshopper group—and never abundant enough to do much harm.

Borers and Black Knot.

TO THE EDITOR:—What time of the year should borers be taken out and black knot be taken off?—SUBSCRIBER, Saratoga.

Whenever you find them. If it requires much of an operation the dormant season is probably best, but the wounds should be covered to prevent decay, which is more likely to start in then than when the tree is growing.

Pruning Almond and Prune.

TO THE EDITOR:—Do you think almonds and prunes would bear more if pruned something as the peach is?—ORCHARDIST.

This matter is now under trial with some growers. We doubt if the trees would bear more and yet in some cases they might do that. We believe they would bear larger fruit, and whether that would bring enough more money to cover the possible loss in weight and the extra cost of growing the fruit by

such regular pruning and consequent thinning of new shoots, is the question. We shall probably have ere long some comparative results by those who are working a few trees by shortening in as contrasted with the prevailing method. Perhaps others will try the same experiment. It may be very instructive.

The Rosney Pear.

TO THE EDITOR:—What do you think of the Rosney pear for valley situations.—READER, Tehama county.

We have no data on the question yet. The Rosney is being chiefly tried in the foothill region whence regular Eastern shipments can be most easily made. Even there the variety is still on trial and it is too soon to make a wide judgment on it.

QUERISTS should always give their correct names and addresses—not necessarily for publication, but because we sometimes prefer to answer by mail.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending November 19, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

SACRAMENTO VALLEY.

The weather has been generally warm and cloudy during the week, with somewhat lower temperature at the close. The rain was needed in some sections, as the soil was becoming too dry for profitable cultivation, and has been beneficial in all sections. Early sown grain is making good growth. Range feed is in better condition than usual at this time, being very rich and abundant. Cattle, sheep and hogs are in prime condition. Good crops of corn, potatoes, beans and pumpkins are being gathered. Plowing and seeding continue. The orange crop is larger than usual in some sections, and the quality is excellent; picking and shipping are in progress. A large crop of olives is being gathered.

COAST AND BAY SECTIONS.

Warm, cloudy weather prevailed during the first part of the week, followed by lower temperature and heavy rain. The precipitation has been general throughout the section, and will prove of great benefit to all agricultural interests, particularly in the southern and central counties, where the absence of moisture in the soil was causing some apprehension of drought. Farmers in that section will now be able to rush the delayed work of plowing and seeding, and it is expected a large acreage of grain will be sown. Pasturage will also become plentiful. The rain was not seriously needed in the northern counties, but will be beneficial. In some sections it is said the soil is too wet for plowing. Hay and early sown grain are making good growth.

SAN JOAQUIN VALLEY.

Remarkably heavy rain followed the fair weather prevailing at the beginning of the week, the precipitation at Fresno and other points amounting to over 3 inches. All parts of the valley have received generous rainfall, and it appears that the great wheat districts have been especially favored. In sections where farming operations have been retarded by unfavorable conditions the work of plowing and seeding will be immediately resumed with greater vigor, and the acreage sown to grain will undoubtedly surpass that of many previous seasons. Early sown grain and pasturage have been greatly benefited. Alfalfa is making heavy growth. Orange picking has been retarded by the rain, but no damage has been done. Orchardists have commenced pruning.

SOUTHERN CALIFORNIA.

Clear, warm weather continued during the first of the week, and was followed by heavy rainfall at the close. The precipitation was general, and was unusually heavy in some localities, about 2 inches having fallen in Los Angeles and vicinity, and 6.50 inches in portions of the mountain region around San Diego; at Santa Maria 1.35 inches fell during Friday and Saturday. The water supply has been materially increased, and citrus fruit trees were greatly benefited. The soil is now in good condition, and farmers will begin plowing and seeding. No material damage has been done by the storm, though orange picking has been retarded. Walnut harvest is completed.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Nov. 21, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week | Total Seasonal Rainfall to Date | Total Seasonal Rainfall Last Year to Same Date | Average Seasonal Rainfall to Date | Minimum Temperature for the Week | Maximum Temperature for the Week |
|----------------------|-----------------------------|---------------------------------|------------------------------------------------|-----------------------------------|----------------------------------|----------------------------------|
| Eureka.....          | 5.64                        | 13.89                           | 11.24                                          | 6.90                              | 42                               | 66                               |
| Red Bluff.....       | .52                         | 4.23                            | 6.23                                           | 4.11                              | 38                               | 66                               |
| San Francisco.....   | 3.24                        | 4.02                            | 6.96                                           | 2.74                              | 38                               | 72                               |
| San Luis Obispo..... | 2.17                        | 4.29                            | 7.58                                           | 3.00                              | 46                               | 64                               |
| Fresno.....          | 3.96                        | 4.42                            | 3.34                                           | 1.32                              | 46                               | 78                               |
| Independence.....    | .30                         | 1.20                            | 1.22                                           | 1.28                              | 30                               | 70                               |
| San Luis Obispo..... | 2.44                        | 4.83                            | 5.84                                           | 2.76                              | 38                               | 80                               |
| Los Angeles.....     | 2.52                        | 2.77                            | 2.44                                           | 2.10                              | 48                               | 80                               |
| San Diego.....       | .72                         | 1.00                            | 1.15                                           | .94                               | 58                               | 76                               |
| Yuma.....            | T                           | .02                             | .58                                            | 1.16                              | 46                               | 84                               |



## HORTICULTURE.

### Olive Culture in San Diego.

By R. C. ALLEN of Bonita, San Diego County, at a Conference of the San Diego Chamber of Commerce.

The olive was probably the first fruit tree to be planted in California. Possibly the orange was planted at the same time with it and the grape also; but however this may be the original olive trees of California still survive and thrive to-day at the Old Mission near this city, and what is more, are still producing fruit many decades after the orange and the vine have been gathered by the fathers for the purpose of feeding the monastery fires. In this we have a practical demonstration of the well-known longevity of this tree. There is an olive grove on the road between Rome and Tivoli, which is said to have been in existence at the time of the Roman empire. Thus we see that a good orchard, planted in the right place and well cared for, is a permanent investment which never needs renewing. As compared with orchards of most kinds of deciduous trees, especially the peach, this is an important factor.

The trees of the Old Mission were planted in 1769, or soon after, the seed being brought from San Blas in Mexico by Jose de Galvez, who accompanied Padre Junipero Serra and his Franciscan monks in the settlement of the Alta California missions. It is thought that these original trees were propagated from seeds and not from cuttings, both because the ship's manifest makes no mention of trees or cuttings, and because there is a variation of type in the Mission orchard such as would naturally come with seedlings.

Until recent years, when importations have been made from all the important olive growing districts of the world, all olive orchards in this State traced their descent from the San Diego Mission trees; and to-day, in spite of the experimentation which has been going on with imported varieties, the Mission remains the favorite, thus demonstrating the wisdom and care which the old padres showed in selection.

The olive tree from its biblical and classical associations has always had a strong attraction for the planter, and in consequence many orchards have been set out, but owing to a widespread misconception of the habits of the tree, more disappointment has resulted than with any other important fruit. Travelers in Italy, a country enjoying a rainfall nearly as bountiful as our Atlantic slope, seeing there the olive thriving on hillsides and apparently barren land, argued at once that the tree prefers such soil and location and should be planted in similar places in southern California, although the rainfall here is only about one-third that of Italy. A moment's reflection would have shown that expectations were unreasonable. The Mission fathers did not cherish any such illusions. They planted the olive on good soil where it could be irrigated if necessary.

**REQUIREMENTS.**—In illustration of this almost universal belief that the olive would thrive anywhere—in fact rather prefers a bad soil—I quote from the report of the State Board of Horticulture for 1891, page 80: "The olive will thrive under distressing conditions, although it repays proper attention. It will do well on lands where other fruits would fail, and it will be found profitable in much of the 'waste' lands of the State." It is not surprising that with such authority many inexperienced planters set out orchards in locations and under conditions where they could never thrive. I quote again from the same writer in a report issued the present year: "The theory for many years advanced, to the effect that the olive would grow and produce bountiful crops on soil too poor to grow anything else, and in locations where other trees would not grow, has been exploded." It is very much to be regretted that such a theory existed, because it has caused the loss of hundreds of thousands of dollars, bitter disappointment to those tempted by it to make experiment of setting out orchards, and also in a measure, given the whole olive industry a bad name. However, time and a better understanding of the habits and limitations of the tree will cause it to recover its reputation, for under right conditions the olive will hold its own with the orange or any other fruit.

There are locations in southern California where the olive will thrive without irrigation, but they are few and far between—moist spots rarely of sufficient extent for orchards of any size. As a commercial proposition irrigation is as necessary to the olive as to the citrus family. The irregularity of crop frequently noticed, is chiefly due to want of regular irrigation. Some have held the belief that it is a characteristic of the tree not to bear annually. While granting that greater care in all details of culture may be required than with the citrus family, yet if the right location for the orchard has been secured—especially in the matter of climatic conditions—I believe that steady crops can be obtained. I know trees that produced good crops annually for six or seven years.

**UNTRIED VARIETIES.**—Another fruitful source of disappointment in olive culture has been the reckless planting of newly imported varieties. People have planted literally hundreds of acres with untested

varieties, simply on the recommendation of nurserymen, whose only interest was to dispose of stock which they had been foolish enough to grow. As an all-round variety the Mission is the only demonstrated success. The reputation of the California ripe picked olive rests entirely upon its peculiar and delicious flavor. It not only makes a perfect pickle, but a good oil. Therefore it is a mistake to plant a purely oil variety, useless for pickles, or one suited for pickles of which no use can be made of the small fruit and culls; unless such variety should prove decidedly superior to the Mission and no other variety has yet demonstrated this quality.

Most of the so-called pickling varieties recently imported are of the type of the Spanish Queen olive and are only suitable for pickling while green. Several of the large fleshy kinds suffer from dry rot, as they ripen, and in any event as they contain little oil, they do not have the fine flavor of the Mission. It is a mistake for us in this State at the present stage of the industry to compete with the Spaniards in the production of green pickles, which they put up to perfection and sell at prices which would leave us little profit. The ripe olive has no outside competition, and sells much higher than a corresponding grade of green imported stock.

Olives suitable for pickling always command a higher price from buyers than those good only for oil; therefore it is reasonable to conclude that they are the more profitable kind to grow. It is consequently important in selecting the location for an orchard to get good soil such as will give large sized fruit, and then to give the soil all the help possible in the way of thorough cultivation, plenty of water and fertilizers when needed.

**BEARING.**—It is not an uncommon thing to see a young orchard bear several good crops and then drop off, from which some have argued that olives become unfruitful with age. I have seen this statement in the papers several times, as if it were a recognized and indisputable fact. That the Mission orchard, a century and a quarter old, still bears good crops would seem to controvert this theory. The true explanation undoubtedly is either that the original fertility of the soil has become somewhat depleted or needs replenishing, or that the pruning has not been looked after so as to furnish the tree with a fresh supply of fruit wood. The olive bears its crops on the growth of the previous year, and if the pruning has been neglected the tree may fail to produce this wood. Another cause of unfruitfulness is the black scale. This is really the only enemy which the tree has. The other scales which do so much harm to the citrus and deciduous trees, do not, as a rule, trouble the olive. In this, and its general freedom from enemies, the tree is fortunate. The black scale used to be a serious pest, since, unless destroyed, it saps the vitality of the tree and causes it to become covered with black fungus or smut. In such condition the trees become unproductive.

Formerly it was necessary to attack this pest with sprays or fumigation, but some years ago there was introduced from Australia the little black ladybird—*rhizobius ventralis*—which feeds upon the young scale and holds it in subjection. This little insect not only saves the cost of spraying or fumigation of the olive, but does the work much more effectually.

In California we find conditions perfectly adapted to the olive, and this is the only State in the country of which this can be said, although the tree will grow in some of the southern States. It requires a climate free from extremes of heat and cold and therefore nowhere do we find these conditions more favorable than in San Diego county, which enjoys the most equable climate in this State. At the present time this county contains some very fine orchards—some of the largest in the State—and the only limit to development is lack of water for irrigation. The completion of the reservoir system of the Southern California Mountain Water Co. will throw open for cultivation much land perfectly adapted to olive culture and equal to anything in the world for this purpose.

**PLANTING.**—In setting out an orchard care should be taken not to plant the trees too close. The size of the tree will depend upon the depth and richness of the soil. I find that some of my trees at 25 feet have been too close since they were about twelve years old and should recommend about 35 feet for valley land, and 28 feet for slopes and uplands. The trees should have no pruning while young except to keep them free of suckers and perhaps give them a little general shaping. A severe cutting on young trees seems to shock the roots—stifle the trees as it were—and orchards treated in this way sometimes remain in a stagnant condition for years. At the end of about three years it will be necessary to give the trees their proper shape, which is the goblet form. Head them at from 2 or 3 feet from the ground, according as best suits the particular case. Be careful not to leave too many main branches; three, or at most four, are plenty.

The olive accommodates itself to any depth in planting, as compared with the depth in the nursery; also it is not disturbed by any amount of filling up in the low places of the orchard as the result of storm wash or irrigation. I have trees buried at least 3 feet deeper than they were planted, and this has proved a benefit rather than an injury.

Owing to this same characteristic in the tree and its absolute freedom from foot rot, there is no objection to irrigation in basins. The method has the merit over the furrow system commonly practised with oranges and lemons, that each tree receives its exact measure of water and all are treated alike.

**OLIVE OIL.**—The oil made in this county has earned an enviable reputation. One of our local manufacturers received a gold medal at Paris this year. The product meets with such a ready sale that it has become necessary to procure olives from outside the county in order even partially to supply the demand. If a really effective law against food adulterations could be passed and enforced it would do much to help olive oil. It is a recognized fact that little, if any, of the imported oil is free from adulteration. Trade statistics show that large quantities of American cotton seed oil go to Marseilles and Leghorn, much of which comes back to this country labelled "Pure Olive Oil." Although cotton seed oil may be satisfactory to many people as a salad oil, yet if the law required the label to show the contents of the bottle the demand for the pure article would increase tenfold. Olive oil is valuable in medicine and has been so recognized since the time of the early Hebrews. In this field purity is of the first importance.

**PICKLED OLIVES.**—However, the great future of the industry lies in the production of ripe pickles. The demand for these has increased wonderfully of late years, not only on this coast, but in the large Eastern cities. Returning tourists have spread their reputation throughout the country. Although not attractive on first acquaintance, the taste once acquired is never lost and the great majority prefer them to the imported green pickle. These ripe olives are much used in cookery. They are frequently recommended by physicians as an article of diet, being useful on account of the oil they contain as a stomach regulator. They are not merely a relish, like the green pickles, but a food—rich and nutritious. With a loaf of bread and some ripe olives the Italian laborer is fitted out for a day's work, for in Italy the people do not eat the green pickles; they are put up for export.

**PICKLING PROCESSES.**—The preparation of ripe pickled olives has not yet been reduced to an exact science. Nearly every pickler has his own peculiar method. They are put up either with or without the use of lye to extract the bitterness from the fruit. Where lye is not used it is customary to slit them and soak out the bitterness with fresh water frequently changed. Where lye is used, great care must be exercised not to soften the fruit by a too strong solution in the effort to hurry the job. One pound of pure caustic potash to five gallons of water, I find a good strength for the first dose, enough being used to cover the fruit well in the vats and to allow of stirring freely without bruising. As the lye settles, frequent stirring is necessary to keep its strength uniform. At the end of twenty-four hours the first lye should be drawn off and the olives examined to see how far it has penetrated. If it has nearly reached the pit, this part of the process is complete. However a second lye solution of half strength—one pound to ten gallons—will generally be needed, and often a third. It is a mistake to leave on the same solution of lye more than twenty-four hours, as its strength is nearly exhausted and it is important to maintain a uniform action in the penetration of the olive by the lye.

It is now necessary to remove all traces of lye by a thorough washing. This will require at least a week or ten days, and is perhaps the most essential point in the whole job to have done right. The least trace of lye will ruin both the flavor and the keeping qualities of the pickle. By the use of litmus paper we can detect the presence of any alkali remaining; but perhaps as safe a guide is a trained sense of taste. While lye remains the fruity flavor of the olive is dormant; when that flavor fully reasserts itself we may feel sure that it is all washed out.

Olives being a ripe fruit and full of oil must be handled with the greatest care to avoid any bruising. The water should be soft and pure. I find it advisable to use salt freely from the beginning, in the lye solution as well as in all the water used for washing. The salt acts in two ways; it "firms" the fruit by its astringent action, and also protects it against the work of bacteria, which are the immediate cause of spoil olives. When all trace of lye is removed, the olives are placed in brine, about ten ounces to the gallon, which has been boiled, skimmed and allowed to settle. They are now ready for the market, and if the work has been properly done, they will keep for one or two years.

When the whole country uses ripe pickled olives as freely as the people of this State do now—and sooner or later this time will come—the industry will take its place as one of the important branches of fruit growing. Indeed a productive orchard is to-day one of its most profitable forms.

### The State Fruit Growers' Convention.

TO THE EDITOR:—The twenty-fifth State Convention of Fruit Growers of California will convene at San Francisco, in Pioneer Hall, under the auspices of



the State Board of Horticulture on Tuesday, December 4, 1900, and continue in session four days. A cordial invitation is extended to all fruit growers and others interested in horticulture and kindred pursuits to be present and take part in the proceedings of the convention, and it is to be hoped that every branch of the industry will be represented.

There are many problems that confront orchardists that can only be solved by the combined wisdom and energy of the great body of fruit growers working in harmony. Subjects of the utmost importance to the fruit industry in general will be considered, and all interested should take an active part in the matter and attend.

All Fruit Exchanges, Associations, Granges and other associations of producers are requested to send representatives to this convention.

The Southern Pacific Co. and the San Francisco & San Joaquin Valley Railway Co. will issue excursion tickets to all persons going to the convention and returning, at reduced rates, from all points on their lines to San Francisco, provided a receipt for the ticket purchased be taken at starting point. This will be countersigned by the secretary and will entitle the holder to a return ticket at one-third the regular rate.

The greatest care will be taken to make the visit of all in attendance of the most pleasant character.

ELLWOOD COOPER, President.

B. M. LELONG, Secretary.

#### Sugar Prune on Peach.

TO THE EDITOR:—In response to your article in the PACIFIC RURAL PRESS of the 3rd inst., we wish to speak of the Sugar prune and its affinity to the peach seedling, as we grow large quantities of trees every season and have several thousand Sugars on peach root. As far as we can see (and we have studied them carefully), the Sugar has made excellent unions on some peach stocks, fair unions on others and again very poor on others under the same mode of grafting and budding, i. e., tongue grafting and shield budding. This proves to our satisfaction that the affinity between peach stock and the Sugar prune differs to a very great extent. Luther Burbank has on his experimental grounds Sugar prune on the Muir-Wager stocks that can not be beaten as to the unions. We have in our test orchard Sugar prune grafts (cleft grafts) two years old on California Cling peach trees that can not be beaten as to the solidity of the union even by grafts of the Petite on the same tree and of the same age. These are more proofs of the affinity between the Sugar prune and peach wood. We shall experiment this season on quite a large number of different kinds of peach wood for our own benefit and also for the public at large, as we think the Sugar prune too valuable a tree to be condemned on peach simply because it refuses to unite on some kinds of peach seedlings. We shall, under no consideration, offer for sale any Sugar prune on peach root that has not made a good union. As this is a very important problem to the nurserymen, and more so with the orchardists, we hope all propagators will give their experiences.

W. H. SCHIEFFER & Co., Santa Rosa Nurseries.  
Santa Rosa.

## THE POULTRY YARD.

#### Other Poultry Troubles.

We have recently given very intelligible accounts of several common poultry complaints and remedies for them by F. D. Chester of the Delaware Experiment Station. The following from the same source will be found worth keeping at hand for use as occasion may arise:

**INTESTINAL WORMS.**—The intestines of domestic fowls commonly become invaded with worms. These belong to three classes: round worms, tape worms and flukes.

The round worms have a cylindrical body, tapering at either end, like an earth worm, and vary in length from  $\frac{1}{4}$  inch to 5 inches. Of these, seven species have been recorded from the domestic fowl.

The tape worms are flat, ribbon-like, elongated and slender, varying, according to the species, from  $\frac{1}{12}$  inch to 4 or 5 inches in length. They are composed of numerous segments. Nine species have been found in the fowl.

The flukes differ from the others in being less elongated or thread-like, but have a rounded or oval form, and are more or less flattened laterally. They are provided with one or more suckers by which they adhere. They are quite small, varying in the different species from  $\frac{1}{12}$  to  $\frac{1}{2}$  inch in length. Five species have been found in the domestic fowl.

The symptoms of intestinal worms are not marked. The birds are dull, lose strength, become thin, show no disposition to run, and are stiff in their walk. The plumage becomes rough, diarrhoea may be present and epileptic fits may intervene.

With the presence of tape worms the same general symptoms may exist. The birds hold the head under the wing; there may be epileptic-form attacks, a stiffness of walk, or a straddling position of the legs.

Sections of tape worm may often be found by examining the excrement, but the best way to prove the presence of worms is to kill a fowl and carefully examine the intestinal track. This establishes the diagnosis for others presenting like symptoms.

The control of the trouble is best effected by sanitary measures. Since the excrement is the carrier of the worms, it is evident that where the trouble is prevalent it will be best to remove the fowl to fresh ground. The excrement should be removed daily from the houses, and the destruction of the worms and their eggs in the latter effected by mixing each lot of manure with an equal quantity of quicklime.

As medicinal treatment, several valuable remedies have been suggested. Oil of turpentine is one of the best remedies for all intestinal worms, two teaspoonfuls administered once daily by means of a tube and syringe. For tape worms, use a teaspoonful of powdered pomegranate root bark mixed with the food intended for fifty head. This should be followed with a dose of castor oil, two to three teaspoonfuls. Another valuable remedy for tape worms is male fern, fifteen to thirty drops of the liquid extract, given morning and evening.

**EGG BOUND.**—Eggs frequently become obstructed in the oviduct for a number of reasons. If the hen be too heavy, the pressure of abdominal masses of fat may constrict the oviduct and prevent the free passage of the egg. Inflammation of the lower portion of the oviduct may also interfere with the free secretion of mucous, which serves to lubricate the latter and assist in the expulsion of the egg.

Fowls so affected show great restlessness and distress. They go frequently to the nest, but are unable to lay. Later they become dull and depressed. An examination will show the presence of an egg.

Inject with a small syringe a teaspoonful of olive oil into the cloaca and carefully manipulate the parts where the egg is felt. If this is not successful, immerse the lower part of the body, including the vent, for half an hour in warm water, so as to relax the parts. Then inject olive oil as before, and gently manipulate the parts; also administer five drops of fluid extract of ergot three times a day.

**PROLAPSI.**—Prolapsis or protrusion of the oviduct is a frequent result of straining in the effort to expel an egg. It may also result from overfeeding, constipation or some inflammation of the oviduct. The protruding oviduct may show intense inflammation, sometimes followed by gangrene, which may be followed by septic infection or blood poisoning.

If the prolapsis be caused by an obstructed egg, treat as directed in the last section. If there be no egg obstruction, treat the parts with carbolized lard and press the protruding parts inward and in place. Before doing this wash the protruding parts clean with warm water. Feed green or soft food. Keep the hens quiet and the bowels open with a dose of epsom salts, twenty grains, and bicarbonate of soda, two grains. To tone up the walls of the oviduct, also administer three to five drops of the fluid extract of ergot.

**INFLAMMATION OR CATARRH OF THE CLOACA.**—This trouble shows itself in the frequent passage of excrement in small quantities, and the endeavor to defecate even when the cloaca is empty. An examination shows the mucous membrane of the cloaca to be inflated, swollen and hot. The discharges are thin and watery, later white and purulent, with an offensive odor, which tends to increase the irritation. The feathers become soiled with excrement or obstruct the vent.

Bathe the inflamed parts in warm water as hot as the bird can well bear. Inject into the cloaca the following solution, until the latter is washed out clean: Water six ounces, glycerine two ounces, morphia sulphate one grain, boric acid one and one-half drachms. Then insert into the cloaca a wad of cotton saturated with the same solution. If the discharge continues, inject or insert a cotton tampon wet with the following solution: Water one ounce, acetate of lead three grains, sulphate of zinc three grains.

**SCALY LEG.**—The legs and feet of fowls sometimes become covered with whitish scales or crusts. Under the scales a whitish, powdery substance is found. The internal structure of these rough crusts is spongy, in the pores of which small mites, not exceeding  $\frac{1}{12}$  inch in length, are found.

The disease is contagious, but not eminently so. The rules laid down for contagious diseases should be followed. For treatment, soak the affected leg in warm water to soften the crusts, then remove as many of them as possible without causing bleeding. Then continue to apply carbolized ointment, one part of crystallized acid mixed with ten parts of lard or vaseline. Equal parts of sweet oil and turpentine will also prove valuable.

**FEATHER EATING.**—The first sign of this disease is the falling off of the feathers in places, these breaking off close to their roots. At the root of the feathers which thus fall off are seen masses of dry, scaly or powdery matter. The trouble commences at the rump and spreads from there to all parts of the body, particularly the head and neck. The trouble is caused by a mite very like the one causing scaly leg, but of a different species.

The irritation which these mites cause leads the birds to pluck their own feathers as a relief. They

also pluck the feathers of other birds, partly out of the habit which they acquire and partly to relieve their companions. The annoyance caused by this trouble may become so great as to produce weakness, emaciation and even death.

The disease is contagious, hence affected birds should be isolated. For treatment, carbolized ointment as used for scaly leg, rubbed well into the affected areas, is recommended.

## THE DAIRY.

#### How to Increase Profits of Our Dairies.

By F. H. ARNSBURGER of Stockton, at the recent convention of the California Dairy Association.

There are many ways through which the dairy business can be aided and perfected, which as yet have not been brought into requisition to any considerable extent in some dairy regions of the State. I understand there are several creamery buildings throughout the State that are standing idle, simply because the conditions necessary to success are not recognized. A great many of our creameries have been started under such unfavorable conditions that they were looked on as untried experiments and with suspicion. However, the prejudices have worn off to a certain extent and the business is experiencing a steady growth.

**WHERE SUCCESS LIES.**—In a great many instances here in San Joaquin valley dairying is carried on as a sort of side line. The producers send their milk to the creamery and seem to think that the price of butter governs their profits, but the governing principles of this prosperity do not lie with the creamery, but rather with themselves. The price is the same to the patron who is making a good profit that it is for him who is losing money. Sometimes dairymen let opposition take the place of fact and thus delude themselves into the belief that they are getting a fair income from their dairies when they scarcely pay the cost. This is due to the fact that a portion of their herds not only produces milk just to pay the cost of keeping, but actually at a loss, which is made up from the balance of the herd. Not to correct this is to neglect the fundamental conditions for success. The first essential then toward increasing profits of our dairies is the selection and breeding of cows that have the ability to convert feed into milk at a profit. It has been my privilege in the past fifteen years which I have spent in the creamery business to give particular attention to testing many different herds and breeds, and have found in herds that have not been carefully bred and selected many cows that would consume feed which cost more than the value of the product they turn out. Again, I have found excellent producers among cows supposed to be scrubs and some terrible scrubby animals among the pure bloods. While it is a fact that the Babcock test in careful hands will determine the butter content in milk with absolute accuracy, patrons of creameries and dairies should have their cows tested at least six times a year and eliminate those that are least profitable.

**THE BABCOCK TEST.**—I was among the first in what is now the principal dairy district of Wisconsin to adopt the Babcock system of operating creameries. The first month's trial nearly caused the closing of our creamery. Some patrons received as high as \$1.50 per hundred for their milk, while the best that we could do for their neighbors was about 60 cents per hundred. This caused dissatisfaction and a general row for a while, but after the plan was fully understood by the patrons the latter set about with the determination not to be outdone by their neighbors. This meant, of course, a contraction of the herds in general. Our tester, which was a thirty-bottle machine, was not allowed to cool off for nearly a year, and in less than two years the supply of milk was increased one-half, and instead of running 10,000 pounds of from 2.6% to 5% milk through our separators, we were running 15,000 pounds, all of which was above 4%—thereby greatly increasing the profits for all interested. I therefore think as a matter of fact that in localities where the dairy business is practically new, and even in some of the older districts, testers are standing idle too long at a time. Especially is this true of skimming stations, where the operator has nothing to do but separate the milk. But, on the other hand, he says that he cannot afford to put in a whole day for the small sum of \$25 or \$30 per month. The writer, of course, has to agree with him there. But would it not pay the association to pay this man a fair compensation for his work, if his qualifications are found sufficient, that he may devote his whole time to their interests? They would be paid tenfold in the course of a short time for their money thus expended.

**EDUCATING PATRONS.**—How many of our creamery owners and managers are giving the matter the attention of educating their patrons they should? The butter maker is sometimes paid a fair compensation for his skill, but how often do we find him doing two men's work endeavoring to educate his patrons in taking the proper care of their milk, and trying to make a quality of butter that will find favor



with the consumer. Under the varying conditions to which the creamery and dairy business is subjected, it necessitates continuous thought and skill to get the results looked for. The butter maker should be thoroughly qualified for his position; he should be given time to attend to his duties correctly, and also should be given full authority to act. He should impress upon the minds of his patrons the advisability of supplying themselves with good dairy literature. He should assist them in striking out on new lines and new methods. Sometimes patrons of creameries say that they haven't the facilities at present for adopting all the new methods as they are advanced. Others say that they do not believe in the practicability of them at all. The latter may greatly increase their profits by digging down below the rust on some of the old ones, and as opportunities present themselves for further advancement they will more fully understand the true economies of the business. They should study and inform themselves along these lines, and dairy farming will be found to hold its own with other classes of farm industries.

### Best Dairy Stock for Alfalfa Feeding.

By JOHN JUDSON, San Pasqual, at the recent Dairy Convention held at Sacramento.

In view of the close competition which now exists in almost every pursuit in life, it becomes us dairy-men to ask ourselves the question, Wherein or in what way can we best attain success in the line of business in which we are engaged?

I think we should investigate this question more from a conservative than from a radical standpoint, not allowing ourselves to be governed by prejudice, fad or fancy. All dairymen know that there are three elements that enter into successful dairying, namely, that of breeding, feeding and the proper manufacture and handling of the dairy product.

LOOKING BACKWARD.—Fifty years ago this State was one vast cattle range and was covered by hundreds of thousands of Mexican cattle, whose value in the dairy line was considered of so little moment that there was not one dairy in the State run for commercial purposes. The early emigrants, seeing the possibilities of the State for stock and dairy purposes, commenced in 1858, and continued for years, to drive across the plains large herds of cows from the Middle and Western States, among which were quite a large number of very good dairy cows, principally grade Durhams. On account of the great periodical drouths that often swept over the interior and southern portion of the State, causing thousands of cattle to die, it was thought that the coast counties were the only portions of the State where farming and dairying could be profitably conducted. Consequently the men of farming and dairying proclivities drifted into the coast counties, where the virgin soil was of the very best, yielding immense quantities of the finest of native grasses.

Here dairying was made very profitable, even with the crude means of manufacturing at that period, but in course of time the large ranges, being cut up into small holdings, were being plowed for farming purposes, and the pastures, being circumscribed, were being overstocked and the native grasses tramped out. The dairyman now found himself under the necessity of providing forage for his cattle in much more expensive ways than formerly, consequently he could not afford to feed poor or indifferent stock. And here was the cause and commencement of the radical improvement in the breeding of dairy stock.

ALFALFA.—A little later on farmers and settlers of the interior and southern portions of the State found that this was the natural home of that greatest of all forage plants, alfalfa. The rich alluvial soil of the plains and river bottoms, the warm climate and the facilities for irrigation from artesian wells and other sources, all conspired to make it the ideal home of this wonderful forage plant, and consequently a dairy region that can successfully dispute the palm of supremacy with the cow counties of the coast. And now comes the question for which this article was written, Which is the best dairy stock for alfalfa feeding?

Alfalfa is not a good pasture plant, consequently the only way to feed it economically is to cut and feed green, cured or as silage. From my experience with the different breeds of dairy cattle, I shall unhesitatingly champion the Jersey breed as decidedly the most profitable dairy stock for alfalfa feeding. I will say, however, that I recognize superior points of merit in each of the dairy breeds, and in certain localities and under certain conditions would probably prefer some other dairy breed to the Jerseys.

DAIRY BREEDING.—I don't know any shorter way of giving my reason for my faith in the Jerseys than by relating my experience in dairy breeding and feeding. In 1853 I went from the mines in El Dorado county to Sonoma county and secured a ranch at Bloomfield, near the coast. At that time the whole of Sonoma and Marin counties was one rich cattle range, being occupied, however, by but comparatively few cattle. In 1856 I formed the nucleus of a

dairy, but the stock did not suit me in all respects, and I went back East and started across the plains in the spring of 1857 with some of the best thoroughbred Durhams of the dairy type that I could find, and the few I succeeded in getting through proved to be as good of that breed as have ever been brought to the State.

Up to 1875 I tried repeatedly to grow alfalfa in Sonoma county, but it always proved a failure. I had heard of its being tried in Los Angeles county on a small scale and that it had proved very successful. In that year I moved my family and some of the best of my Durham stock to San Diego county and located in the valley of San Pasqual.

I immediately commenced seeding my river bottoms to alfalfa, which proved a great success. I often cut seven heavy crops of hay from the same land during one season. I now thought that I had struck it rich and was independent of the effects of drouths and all the troubles that the county was heir to. But here I found my mistake, for the climate of our valley during the summer months is so warm that for quite a period it was very difficult to make good butter, and, when made, it was a great deal of trouble to ship it to San Diego, a distance of 36 miles, in good condition.

THE JERSEY FOR A HOT PLACE.—Hearing that one of my neighbors had an extra fine Jersey cow that he had brought from Massachusetts, and that the butter made from her milk would stand up in any kind of weather, I concluded to investigate, and found the report to be true. I thereupon bought a bull calf from the cow and a regular Jersey bull to breed to my Durham and grade cows. I made no mistake in this move, as every one of the heifers of his get proved to be a superior dairy cow.

THE HOLSTEINS.—After I got the Jersey blood into my herd I had no more trouble with soft or oily butter until later on. About the year 1887 or 1888, Mr. E. S. Babcock of Hotel Del Coronado fame, while in New York, purchased a herd of eight cows and two bulls of the Holstein breed that had recently been imported from Holland. They were said by judges to be as fine specimens as ever came to the United States. He shipped them to Coronado for the benefit of the hotel, and selected one of his best bulls and put him on a ranch he owned adjoining mine. Having nothing but a three-wire fence between us, his bull would often visit my herd, and, as he was such a fine specimen and of such famous stock, I did not make much of a kick, as I was somewhat curious to see what the cross would amount to. I will say here that out of seven heifers that I got from the Holstein bull but one proved at all satisfactory. I kept them all until grown and thoroughly tested. The one exception proved to be an extra good cow, producing over two pounds of butter per day for several months. She was from a high-grade Jersey cow, whose dam would make over two pounds per day for quite awhile on good pasture alone. The heifers from my Jersey bull and the same cows that the Holsteins were from all proved much superior to the Holsteins as dairy cows.

Mr. James Duffy, who owns the Julian Creamery, had a very fine herd of Holsteins and thought they were good enough for anyone. Last year his dairyman, who had worked on my herd, induced him to buy ten Jersey cows from one of my neighbors which were all from my breed of cattle. His dairyman informed me a few days ago that, after thoroughly testing the relative merits of the two breeds as butter producers, Duffy had come to the conclusion that the Jerseys were much superior and that he had sold the most of his Holsteins for beef and was getting rid of the rest as fast as possible. I am aware that it does not prove a fact, even when the experience of two or three parties in the same line agree; but you will all admit that throughout the United States and Canada the consensus of opinion is that the Jerseys are the most economical producers of high-grade butter of any of the dairy breeds. Of all the Holsteins that have been brought into our county, but few remain. The most of them have been made into beef and their places filled with Jerseys and their grades.

HARD AND SOFT BUTTER.—It is a well known fact, that most dairymen are aware of, that the butter from certain cows in a herd will be much firmer than from others. I know from experience that this fact holds good as between breeds of dairy cattle, especially between the Jerseys and Durhams, and Jerseys and Guernseys.

Before the advent of the ice factory and refrigeration, the proprietors of two large dairies in our county, each of whom owned from 200 to 300 Durham and grade cows, told me that they found it very difficult during July and August to get their butter to market in good shape. One of the creameries was beside the railroad track, within two hours' run of San Diego; the other was about 30 miles from the railroad station. The latter party would, during hot weather, start his butter wagon at 2 A. M., so that the butter would arrive in San Diego at 8:30, and it would often arrive at the commission house in such condition that it could not be handled. At the same time, I would start from my creamery at 8 A. M., drive 7 miles to meet the express wagon on which I shipped the butter to San Diego, where it would arrive at 4 P. M., and, with but three or four exceptions in

nine years, always came to the grocer in good shape.

Some years ago I saw in one of my dairy papers the test that had been made in one of the Eastern experiment stations to ascertain the proportionate amount of the different constituents in the butter fat of the different breeds of dairy cattle. The result showed that the Jerseys contained a larger percentage of stearine—the hardening principle—than any other breed. I think the Holsteins came next. The Guernseys showed the least stearine and the largest percentage of olein. I think that this accounts for the fact that Jerseys, as a breed, produce hard butter and the Guernseys very soft or oily butter.

All dairymen know that in breeding a herd of dairy cows up to a high standard of excellence, there will necessarily be many culls to dispose of; and herein is where the Jerseys make the greatest failure of any breed.

THE GUERNSEY.—About eight years ago I bought a fine young registered Guernsey bull from a herd that had been imported from the Guernsey islands. The cows were much larger than the Jerseys, showed fine udders, very rich skin, and the butter was a deep orange color. I had the impression that their characteristics in the dairy line were about the same as the Jerseys, and, for an all-purpose cow, would be much superior. I kept the bull three years and then sold all his heifers for beef and family cows. Their milk was of the very best for family use, but in hot weather their butter had to be handled with a spoon.

In conclusion I would say that from my experience and observation a special-purpose cow is much the most profitable where a dairy cow has to be kept up and fed, as is necessary when feeding alfalfa. For alfalfa feeding in the great alfalfa region of the interior and the southern portion of our State, where the temperature is uniformly high, the Jerseys are preeminently the most profitable, for the reason that as a breed they produce the highest grade of butter. The natural color of their butter is the best and most popular, and, for our hot alfalfa valleys, they produce the firmest and best butter to handle and ship.

According to the experience of a great majority who have tried the different breeds, and of Prof. Haecker of the Minnesota Experiment Station, the Jerseys, from a given quantity of food, will produce the greatest amount of the highest-priced product of any breed on earth.

### Programme of the Fruit Growers' Convention.

The State Fruit Growers' Convention, to be held in Pioneer Hall, San Francisco, Dec. 4th to 7th, promises to be largely attended. The principal topics of interest will be the securing of more rapid and cheaper means of transportation, the widening of the market for our fruit and fruit products and the improvement of methods in growing, packing and preparing for market.

Hon. Ellwood Cooper of Santa Barbara will, in his annual address, draw attention to numerous matters for the consideration and action of the convention. Among other matters of interest before the convention will be an address by William B. Gester on "The Marketing of California Fruit;" William H. Mills of San Francisco on "The Economics of Products, and Their Influence Upon Fruit Growing of the World;" Hon. Alden Anderson, Speaker of the Assembly, on "The Necessity for an Improved Expedited Freight Service for Eastern Fruit Shipments."

Judge H. G. Bond will speak on "Advantages of Co-operation." This subject will also be treated by A. H. Naftzger, president and general manager of the Southern California Fruit Exchange. Col. H. Weinstock of Sacramento, president and general manager of the California Fruit Growers' & Shippers' Association, will make a report on the season's operations and the lessons to be deduced therefrom. George C. Roeding of Fresno will deliver an address upon "The Smyrna Fig."

The raisin industry, giving a review of the season's output and the advantages of co-operation among the farmers, as illustrated by the raisin industry, will be presented by T. C. White, treasurer of the California Raisin Growers' Association. The canning industry will be especially considered in an address entitled "Orchard to Table, From a Canner's Standpoint." Isador Jacobs will present a paper on "Future Trade Possibilities in Canned and Dried Fruits."

The necessity and advantage of resistant stock in vineyards will be reviewed by Mr. Bioletti of the University of California and John Markley of Geyserville.

During the convention addresses will be delivered by David Starr Jordan, president of the Stanford University, and Benjamin Ide Wheeler, president of the University of California, on subjects germane to the occasion.

The committee having the matter in charge have been unsparing in their efforts to make this the most successful convention ever held. A fine display of fruits and fruit products, showing methods of curing and packing, together with improved machinery and appliances for curing, canning and packing, and methods of packing and marketing will be made.



## Agricultural Review.

### ALAMEDA.

**SUGAR SEASON OVER.**—Niles Herald, Nov. 16: The Alameda Sugar Company completed its run on beets last week and closed down Saturday. The run this year was shorter than last, but the yield of sugar was much better, hence the output exceeded last season's. A large force of men were let out, and about 100 transient have left town. The hotels, boarding-houses and stores feel the difference.

**BREEDING BLASTOPHAGA FOR FIG FERTILIZING.**—Niles correspondence Oakland Enquirer: Professor Swartz of Washington is spending several days with his friend John Rock at the California Nursery. Professor Swartz will establish several colonies of the insects that are used in fertilizing the Smyrna fig. In this vicinity one of the colonies will be placed in a sheltered spot and free from the north winds and frost, on G. E. Chittenden's orchard. Mr. Chittenden has several large fig trees in his orchard, which will be the winter home for the colony. The experiment was tried in Fresno, but the frost killed the insects and it was suggested that this vicinity might produce better results.

### BUTTE.

**OLIVES AT PALERMO.**—Oroville Register, Nov. 15: The crop of olives in this section is so large that it is with much difficulty they can be cured or pressed into oil this fall. The works of all the companies handling olives will be used to their extreme capacities for the next few weeks in trying to pickle the olives or make them into oil. Jas. Fitzgerald of Palermo states that he has charge of three lots of olives from as many different groves this fall. He is caring for the olives of the P. C. N. Association, of those from the grove lately bought by Louis Glass and those for Porter Bros. He is now putting into the vats about 2000 gallons a day, and will pickle this fall at least 25,000 gallons. He has twenty-five men at work in the field and in the factory.

**ORANGES AT PALERMO.**—Oroville Register, Nov. 15: Oranges are ripening fast, and it is expected that during the next ten days about twenty-five carloads will be shipped from Palermo. Mr. Fitzgerald estimates the orange crop of the colony this fall at fully 250 carloads. Two express wagons and three drays were engaged by Wells, Fargo & Co. on Saturday afternoon and Sunday morning hauling fruit to the depot for shipment. Eight hundred boxes were put into cars and shipped on the noon train yesterday to various points in Washington, Colorado and Arizona. This makes about 2000 boxes shipped by express so far this season.

**HEMP THRESHING.**—Gridley Herald, Nov. 17: John Heaney, the Gridley hempman, says he has just finished threshing that portion of his crop which he saved for feed, of which he secured 300 bushels. The crop of 1900 is already partially settled, and some of it will soon be ready to break. Mr. Heaney will make numerous improvements in his mill this year, and expects to obtain the heaviest crop of fiber in his experience in the hemp business.

### COLUSA.

**OLIVES ON THE PLAINS.**—Colusa Sun, Nov. 17: Tom Lanahan brought to this office a quart bottle of as fine ripe olives as we have ever seen, grown on his place southwest of Maxwell. It takes 1½ to weigh a pound, and this we take to be good for the Mission olive. Suppose when he set out the few trees—too few to do anything with—he had planted forty acres? There would have been an independent living secured.

**CHEAP AND DURABLE ROADS.**—Colusa Sun: At invitation of Supervisors Hoke and Niesen and Engineer McMurtry of Sutter county, a visit was made the rock crushing works at the Buttes. This is the fifth sitting in different parts of the mountain. A road 9 feet wide and 9 inches deep costs from \$1000 to \$1500 per mile, as follows: From \$3.50 to \$5 per rod, according to length of haul; cost of crusher, \$1100; engine, cars, bins, etc., \$700; total, \$1800.

|                                   |         |
|-----------------------------------|---------|
| Cost of running 25 men .....      | \$25 00 |
| Fifteen teams, one day .....      | 15 00   |
| Fifteen sleds and wagons .....    | 3 75    |
| Wood .....                        | 4 00    |
| Superintendent and engineer ..... | 6 00    |
| Water wagon .....                 | 3 00    |

Total cost for one day's run....\$82 75

### LOS ANGELES.

**NEW ORANGES MOVING.**—Pomona Progress, Nov. 15: The first carload of new oranges to be shipped from the territory of the San Antonio Fruit Exchange this season went out Friday night from the packing house of the San Dimas Citrus Union. The fruit was well colored

Washington navels. The Claremont Exchange may ship some this week, but the Indian Hill at North Pomona will not, and it is doubtful whether the Pomona Exchange packs any new fruit before November 25th.

**FRUITS AND NUTS AT FULLERTON.**—Pasadena Star, Nov. 14: A carload of lemons and six carloads of walnuts were recently shipped from Fullerton in one day. The net returns to the owners from this shipment was something over \$12,000. The new crop of citrus fruits for this locality is estimated at 700 carloads. Nineteen carload lots of walnuts have been shipped from the Fullerton packing house to points in the East during the present season.

### FRESNO.

**A BIG LAND DEAL.**—Fresno Democrat: The Fresno Canal and Irrigation Company has sold to L. A. Nares 13,000 acres of the land on the Laguna and covers all land under the present subdivision and placed on the market. The consideration is not known, but the land is worth at least \$400,000.

**SULTANAS.**—Reedley Exponent, Nov. 15: Probably the oldest vineyard in this corner of the raisin belt is that of Mr. Martin Miller, near the Riverbend school house, 3½ miles west of Reedley, a part of which was planted nineteen years ago last planting season. Mr. Miller has 3094 Sultana vines on his place, and as they are planted 8 feet apart, they cover 4½ acres. This year these vines produced 11 tons 450 pounds stemmed and weighed in the 50-pound boxes. At the present price, over 7½ cents per pound net after packing charges, Mr. Miller's Sultanas will net him \$1,427.60 or \$320 per acre. His Sultanas were bleached and cost him \$60 besides the ordinary expense of about \$25 per acre per year to take care of a Sultana vineyard.

### HUMBOLDT.

**PRODUCE SHIPMENTS.**—Eureka Standard: The exports from Humboldt county in October included 359,660 pounds butter, 43,200 pounds fish and 9580 boxes apples. The month held up well with the previous months of the year. The butter exports, of course, shows the usual seasonal falling off, being about 126,000 pounds less than that of the previous month. The shipments of apples, however, were phenomenal, being more than three times greater than for any month on record, while the shipments of fresh fish were nearly double those of the same month of last year.

### LOS ANGELES.

**IMPROVED PLANT FOR FRUIT PACKING.**—Covina Argus, Nov. 17: The Fay Fruit Co. at this point will be in the field for lemons this season. The firm's representative is having a lemon room with a capacity of three cars of fruit constructed at the east end of the packing house upon the most approved methods. The ceiling and walls will be plastered, making it absolutely dark. The room will be ventilated by means of ventilators in the ceiling and floor, maintaining a free circulation of air, and so constructed that they can be closed from without. This room is constructed similar to Little's celebrated curing house at Ontario, who has proved himself to be one of the most successful growers in the State, besides being a leading packer and shipper.

### RIVERSIDE.

**GOOD SALE OF ORANGES.**—Press and Horticulturist, Nov. 13: Riverside Navels promise to bring very satisfactory returns this year. This is evident from the sales already made and the contracts that are being signed by the fruit men. Henry Wotten, owner of the Beulah grove, corner of Adams and Victoria streets, Arlington Heights, disposed of his entire crop to Sandilands Bros. for \$22,000. There are sixty-six acres in the grove, and all but six are in bearing—Washington Navels. This sale so early in the season would seem to indicate that fruit men are hopeful for a good market at good prices. Mr. Wotten's fruit is very choice. It is estimated that there are 16,000 packed boxes on the trees.

### SAN DIEGO.

**BEAUTIFUL APPLES.**—Pomona Times: The Times has been shown samples of as nearly perfect apples as it is often the pleasure of mortals to see. One was a Black Astrachan, weight ten ounces, and one of another variety of which the name could not be learned. They were grown on the ranch of Mrs. Mary A. Page, San Felipe valley, near Warner, San Diego county. The largest apple weighs fifteen ounces, is a beautiful bright red, and in every way a perfect apple, free from any perceptible blemish or defect.

### SOLANO.

**NEW FORM OF DISTEMPER.**—Solano Republican, Nov. 16: Quite a number of

horses in this vicinity have recently been afflicted with what appears to be a new form of distemper. The disease is of a milder type than is usual, and the animal soon recovers from the effects of it. There is considerable swelling in the sheath and legs and some in the head and hips, but there is an absence of any discharge from the nose. The disease readily yields to treatment, and the affected animal usually recovers in from eight to ten days.

### SAN JOAQUIN.

**NO BEETS NEXT YEAR.**—Lodi Sentinel, Nov. 17: No sugar beets will be grown in this county next year, and it is doubtful if the proposition will again be tried in this neighborhood for some time to come. For two seasons several agriculturists in the vicinity of Lodi and New Hope have been experimenting with sugar beets, but the returns have been so light that they have decided not to make another attempt till the indications are better for rain. Both seasons they planted beets there were no late rains, and the crop did not mature as well as it would had there been more water. A. J. Larson, who spent considerable time inducing the farmers to take up beet culture, says that it would be out of the question to get them to make another attempt, as most of them are disgusted. He put in some 160 acres of beets and did not make enough out of the crop to pay for cultivating them. The soil in this part of the county, as well as at New Hope, is especially adapted for the growth of sugar beets, and those raised carried a high percentage of sugar. A large crop of the same quality would have brought the growers big returns, as they would have received a bonus for syrup going over the required standard. In speaking of beet culture, Mr. Larson stated that in his opinion the best way to interest farmers in the proposition would be to get them to grow only ten or twenty acres of beets at first. In this way they could have the vegetable well cultivated and give it proper attention, a thing that is necessary to make a success of beet growing. After the first or second year the experience gained would allow every one to extend the acreage till a large tract could be grown with success.

### SANTA BARBARA.

**PLANTING SUGAR BEETS.**—Lompoc Record, Nov. 17: There will be from 4000 to 6000 acres of sugar beets put in on the mesa lands bordering the railroad along the ocean. The result of the experiment of planting 1200 acres of this land the present season and the extra sugar qualities they contain have made the company anxious to secure as large an area as possible.

**INCREASING ACREAGE OF RED OATS.**—Lompoc Record, Nov. 17: There will be 2000 or 3000 acres of red oats sown the coming season on our lighter mesa lands. The yield was good last season and the hay said to be first-class. This cereal thrives and matures on a less rainfall than barley and is in better demand at a higher price, and the yield about the same. If this variety of the oat is exempt from rust, which is claimed for it, a condition we fear in a wet year, it is a good crop for the lighter upland, of which we have so large an area in northern Santa Barbara.

**APPLE PACKING.**—Lompoc Record, Nov. 17: Mr. Wilson will soon wind up his apple packing for this season, having quite perceptibly reduced his force. The demand has been and is good, but not at the prices of last year, when anything in the shape of an apple brought good prices. Even the culls sold as high as \$10 per ton. This year the culls are a dead loss unless one has stock to feed them to. This condition must, in future, be looked after as in other sections where apple growing is a specialty. Watsonville has several evaporators and numberless vinegar manufacturing to utilize this quality of fruit, and we must look to its saving in future. Next year there will be 200 tons of it.

### SANTA CLARA.

**ANOTHER FRUIT SUIT.**—San Jose Herald, Nov. 18: The California Cured Fruit Association to-day sued the Phoenix Raisin Seeding & Packing Co. to recover \$800 damages alleged to have been sustained by plaintiff through the mingling by defendant of 25,000 pounds of dried prunes stored in defendant's warehouse with other fruit there.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian, Nov. 15: Missouri Pippins are now moving out, with a fair demand. The windfalls are being utilized. The juice pressed from them finds a ready sale. Newtowns have been selling in England this week at 8 shillings and upward. M. A. Hudson has leased the Cassin farm, near Vega, and will plant the same to strawberries for next season. The Watsonville Vinegar & Cider Works is pressing quite a quantity of juice, and the manager says he has orders for all he can

turn out this season.—Last Saturday twenty-three cars of apples were shipped from Watsonville. It was the largest shipment of apples ever made from this place. It was a big trainload.—Eastern and foreign apple shipments for the past two weeks amounted to 90 cars; total for season, 420 cars. This does not include State shipments.—The warm weather this month is trying on apples. It has colored them rapidly, and it is feared that they will not hold out as well as usual. The Bellefleurs softened rapidly before the close of the season.—The Bellefleur season is over. There are a few boxes left in some of the packing houses, but a carload could not be purchased without gathering portions of it from several packing houses. The Bellefleur crop was good, prices averaged well, and the apples moved off far better than seemed probable at the opening of the season.

### SONOMA.

**IN FULL BLOOM.**—Sonoma Index-Tribune, Nov. 17: A novel sight can be seen from the road between this place and Napa. It is a cherry orchard in full bloom on A. D. Lowell's farm. A number of pear and prune trees are also in full bloom on J. V. Miner's ranch near Glen Ellen. In short there is hardly an orchard in the valley that does not contain one or more trees in bloom. This is a very unusual sight in Sonoma valley in November and is due to the spring-like weather of the past six weeks. It is not thought that this early blossoming will reduce the fruit crop next season. An old orchardist says the buds are dormant ones—that is to say, they were held back by unfavorable weather last spring—and their blossoming will have no influence whatever on next year's crop.

**WOOL SALE.**—Healdsburg Enterprise, Nov. 17: Thursday was the semi-annual wool sale day. About 800 bales of wool were offered. The price obtained was 11 to 11½ cents per pound. The growers were fairly well satisfied with the price.

**CLOVERDALE ORANGE AND OLIVE CROP.**—Santa Rosa Press-Democrat, Nov. 15: A prominent resident of Cloverdale states that the olive crop there is the biggest ever known. The largest olive orchards at Cloverdale are those owned by S. A. Kleiser and Dr. A. M. Coomes. Preparations are being made to begin the crushing of the crop, as the olives are ripe. Besides the two persons named, there are others who also have a number of trees. The orange crop will be a good one, and while the trees in the orchard may not have such a heavy load of the golden fruit as they had last year, yet the oranges will be of splendid size and of excellent quality.

### TEHAMA.

**BEAUTIFUL FRUIT LADEN TREES.**—Red Bluff News, Nov. 16: The orange trees about town are quite heavily loaded with their fruit, which is rapidly ripening, and rich green leaves and golden spheres present a most beautiful and tempting appearance.

**LARGE QUANTITIES OF DRIED FRUIT.**—Red Bluff News, Nov. 17: Dried fruit from the orchards in the vicinity of Red Bluff continues coming in and at the present time there are over 700,000 pounds of dried prunes and peaches in the packing house of Porter Bros., a considerable part of which has already been graded and prepared for shipment. Manager Stice says he soon expects instructions to begin shipping.

### TULARE.

**HEAVY YIELD OF SULTANA RAISINS.**—Dinuba correspondence Reedley Exponent: From twelve and one-half acres of Sultana vines W. B. Nichols has cured forty-one and one-quarter tons of raisins this season. Can any one beat that?

### YOLO.

**OLIVE OIL PLANT.**—Yolo Mail, Nov. 13: Messrs. W. L. Morris and E. D. Smith, who reside near Yolo, have been busy for some time preparing for the erection of an olive oil mill at Woodland, and they are having the necessary machinery constructed and expect to be ready to commence crushing olives this season.

## Horse Owners! Use

GOMBAULT'S

## Caustic Balsam



A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland O.



## THE HOME CIRCLE.

## Joy for Everything.

## I.

There is a joy for everything  
Whatever it may be,  
For birds and poets, songs to sing  
And buds to grace the tree.

The stars give gladness to the night,  
The day laughs for the sun,  
And blossoms bring the bees delight  
Until the day is done.

My Sweetheart's whispers thrill the rose  
With rapture on the vine;  
That is the joy my Sweetheart knows,  
And she alone is mine!

## II.

Just a leaf in April weather  
With a changing sky above,—  
Sun or shower, or both together,—  
Just a leaf—a heart in love.

First it droops and then it dances,  
Like the heart when she is by,—  
Doubt or hope caught from her glances,  
Cloud or sunshine from the sky.

Luckless heart and luckless lover,  
Luckless leaf upon the tree,  
How, alas! shall they discover  
What the April's word will be?

Courage! She will surely bring it  
When the fragrant blossoms blow;  
They shall hear the thrushes sing it;  
But, I wonder,—Yes or No.

—Frank Dempster Sherman, in *Delineator*.

## A Sudden Hero.

One Tuesday morning—to be exact—it was the 26th of April, 1898, young Mr. Black came down to breakfast a trifle late and rather out of sorts, to find Mrs. Harford with dim eyes, pouring the coffee, and two lady boarders buried in a common newspaper.

"Good-morning!" said Mr. Black, generally; then, with some degree of interest: "What's the latest war news? Are the Chicago boys really going out?"

"Yes they are!" cried Miss Loomis, unconsciously playing peek-a-boo over the top of the paper. "Isn't it delightful?"

"Delightful! Well—Why, Mrs. Harford, I actually believe you've been crying about it."

"Yes, I have, Mr. Black," answered the landlady a little defiantly. "You young folks see only the glory of it, but I can't forget that people will soon be reading long lists of killed and wounded in that same newspaper. I saw it all in the sixties."

Mr. Black had the grace to drop his bantering tone at that, and the two ladies cast aside the paper and drew up to the table with rather sober faces.

"Where's Whitman?" queried Mr. Black, rather to break the silence than from interest; "it's queer for a steady old codger like him to be late."

"He was up earlier than usual," answered Mrs. Harford, but he had a little business to attend to before breakfast."

"Business before breakfast!" cried Mr. Black, who could not keep still long. "Gad! I'll bet he's gone to enlist." And he laughed loudly at his own joke.

"If you think it's such an amusing matter why don't you go and enlist yourself?" asked Miss Loomis, a little smartly, for his ridicule grated on her romantic sense.

"I?" he jeered. "No, I thank you! I'm as patriotic as the next fellow, but if I enlist I want a chance to fight, not merely to trot around in a misfit uniform and mash the girls."

"I think these boys are anxious enough to fight," remarked Mrs. Gresham, with a quiet conviction that seemed to be shared by the other two women.

"It's easy enough to be anxious when they know there's no chance of it," sneered Mr. Black.

Just then the front door opened and closed gently, there was a quite step in the hall and Mr. Whitman entered and dropped into his accustomed seat between the two widows.

"Good-morning, all," he said, quietly; and he had creamed and sugared his oatmeal before he noticed that his salutation had not been returned.

He looked up wonderingly, then a slight flush crept into his face, and a momentary curve softened his lips. Mrs. Harford had her handkerchief to her eyes; but his three fellow boarders were gazing at him dumfounded. It was the same calm, pale, clean shaven face that they were accustomed to see but in place of his usual neat business suit he wore the army blue, and on his sleeves were the white chevrons of a corporal.

"Oh, Mr. Whitman," cried Miss Loomis, "and to think you never told us!"

"By jove, old man, I want to shake hands with you!" exclaimed Mr. Black, with a sudden and radical change in his estimation of this "old codger."

"This explains your red eyes," remarked Mrs. Gresham to Mrs. Harford.

"Yes," sobbed the other from behind her handkerchief, "I saw him when he came down this morning."

"What's your regiment?" queried Mr. Black.

"The First," with a touch of pride.

"And are you really going to Cuba?" asked Miss Loomis, with a tone of awe in her voice.

"Oh, no! only to Springfield," was his matter-of-fact reply.

"But you expect to go there later?"

"We hope to," and for a moment there was a flash in his eyes that opened new lines of thought for the dazed Mr. Black.

Then Miss Loomis, who gloried in her femininity, drew a long breath and sighed, "Oh, how I wish I were a man!" And the others did not even smile.

"How long have you been in the guard?" asked Mrs. Gresham, secretly wondering how he could make his breakfast so quietly.

"Four years."

"Then this is what has taken you away from home so much of late?"

"Yes, regular drills almost every night."

The others could only look their penitence at one another.

"Say!" burst out Mr. Black suddenly, to atone for his unusual silence, "can't you get me into the regiment?"

"Why, Mr. Black," gasped Miss Loomis, "and you said—"

"Yes, I know I did," he interrupted in confusion, "but I was a fool, and didn't know what I was talking about. Say, can't you, Whitman?"

"I'm sorry, old man, but we have more men now than we know what to do with."

"And the other regiments—?"

"Are just as bad." And having finished his breakfast Mr. Whitman rose from his seat.

A sudden stir swept over the others, and Mrs. Gresham voiced the fear of all when she asked, almost tremulously, "Shall we see you again before you go?"

"Oh, yes. I shall be at dinner as usual; we don't leave until eight," and with a quiet "Good-morning" he went out, taking his slouch service hat from the hall rack as he passed.

"I've been a confounded fool," ejaculated Mr. Black disgustedly, as the outer door closed.

"We have all misjudged him," said Mrs. Gresham, softly.

Dinner time arrived and Miss Loomis and Mr. Black returned from the city, she with a pair of little flags, Cuban and American, crossed on her breast, and he wearing a red, white and blue tie, and with a huge metal flag on his lapel; but they found both the widows wearing knots of the national colors; the table was gay with flowers and Mrs. Harford's choicest service, and a silk flag hung from the chandelier. There was an air of suspense and excitement about the four and Mrs. Harford was smiling through tears.

Mr. Whitman appeared promptly at six, with the same calm face and imperturbable air. He flushed a little at their effusive greeting, and when he saw the decorated table he turned to the landlady with a quiet smile.

"I'm afraid you're trying to make it hard for me to leave, Mrs. Harford."

The widow choked down the lump in

her throat and smiled up at him bravely.

"You're too good a boarder to lose, Mr. Whitman, and I know you won't get anything fit to eat in that horrid camp."

It was perhaps just as well that Mr. Whitman was a matter-of-fact person; otherwise the pains the good woman had taken to provide his favorite dishes and the worshipful attitude of his companions might have made him act in an unsoldierly manner, as it was, he alone was conscious of his occasional dimness of sight.

While they were dallying over the desert and tactily postponing the time for good-bye, Miss Loomis suddenly burst forth:

"Mr. Whitman, aren't you going to ask us to come and see you off?"

The young man looked at her in surprise.

"Why—" he stammered and then stopped.

For the first time he appreciated the light in which he appeared to these people.

"I should be very glad to see any of my friends at the station," he said, with an effort, but their murmured thanks sounded cold. Then it suddenly dawned on him and he glanced around the table with a glimmering smile.

"Would you all really like to go along with me now, just like a family party?"

"Would we!" they cried in delighted chorus, and Miss Loomis added:

"Oh, Mr. Whitman, you don't know how proud I've been all day to think I had a soldier of my own."

"Why certainly," he cried briskly, doing the proper thing with an ease that surprised him, "you can come right along to the armory with me now, and then go up to the station and bid me good-bye. They'll all have some one to see them off, and I shan't want to feel odd."

And with a great flurry and chatter the two women hurried away for their wraps.

"Here, Mr. Whitman," cried Miss Loomis, as the quartette reassembled, you must show your colors," and she snatched the tiny American flag from her breast and pinned it in the front of his blouse, trying to put a graceful fold into the stiff little bit of cloth. I'll keep the Cuban one, for the single star will symbolize my lonely condition," she added with a touch of coquetry.

"And when I come back they will be united forever," he answered, with a flash of martial spirit.

"Don't forget to look for me on the sidewalk," said Mrs. Harford, as they started. I want to wave you a good-bye."

"I may miss you, though," said he, taking both her hands, "and when I say good-bye I want to thank you for all you've done for me."

"Good-bye, my dear boy, and God bless you!" she answered, with a sob in her voice, but looking up with shining eyes. And with a sudden impulse, he stopped and kissed the kind motherly face.

The other incidents of that memorable night were a blur of tossing banners, shouting crowds, tear-stained faces, and long lines of blue, shot with glinting steel.

To the two women it was a delightful experience, despite that vague unpleasant tugging at the heart. They clung close to the soldier boy, gloried in the thought that they knew one of the brave young heroes, and shone proudly in his reflected light. They had eyes for none but him; and to them the two modest white stripes on his sleeves were a prouder badge than the gilded strap on the shoulder of his colonel. They handled and snapped his gun, poked their fingers in the empty loops of his cartridge belt, sighed pityingly over his bulky blanket roll, and wondered at the bluntness of the bright bayonet; and all the time they gazed at him with such admiring eyes that he must have been much embarrassed had not his comrades been undergoing similar treatment from worshipping friends.

It was all a dazzling realization of the pomp and glory of war, the martial echoing tumult in the huge armory, the short march through the madly cheer-

ing crowd, and the terrible crush and the last wild moments in the swarming station. And through it all the two women were always seeking for a white-banded sleeve and crying. "There he is!" at one another, as if the others in that sinuous line of blue were but phantoms. Mr. Black was with them all the while, but they were conscious of his presence only when he was needed to force them a passage-way through the crowd.

It was not until they were at the station in the midst of that bedlam of sound and motion, battling to hold their cherished place that the two women began to realize what was behind it all. They had caught from the crowd the mad dare-devil spirit of patriotism that wins battles and makes heroes; now as they stood by the line of young soldiers and heard the tearful good-byes, the thought came to them—that this was not all of war, that the home coming of these men might be different—if, indeed, they came home at all.

Mr. Whitman's company was standing at ease, momentarily expecting the order to enter the cars beside them; and the quartette had gathered for what might be the last time.

Miss Loomis laid her hand on the arm of the young corporal, and looked up with all the coquetry gone from her pretty face.

"Now, Mr. Whitman," she said pleadingly. "I can't tell you how proud we are of you; but you musn't go and do anything rash. Don't try to fight all the battle—for you must come back to us."

Her hand had fallen to her side, and his slipped over it now. No one saw the action in the pressure of the crowd.

"Would it make any difference to you if I didn't return?" he asked, bending down to read her face in the fantastic light of the place.

"Indeed it would!" she answered quickly; and perhaps something she saw in his eyes sent that faint flush into her cheeks.

With a sudden movement he sent the slouch hat from his head and tore from its front the crossed rifles.

"I leave you a memento, anyhow," he said with a laugh that was not quite natural.

"Oh, Mr. Whitman!" she cried, feminine vanity gaining the ascendancy, that's awfully sweet of you! I just longed for that but I didn't dare ask for it."

"It's a wonder I thought—I'm usually so stupid," he replied with a frankness that surprised them both. "May I?" And without waiting for oral permission he pinned it to her trim jacket with fingers that trembled a little. He

## BIG-HEAD CHILDREN

with long thin necks—you see them in every school—want Scott's emulsion of cod-liver oil, to build up their poor little shrunken scrawny bodies.

School will be of no use to them. Something will carry them off.

They have no play in them. There is no fun in playing, when everybody else can run faster, jump further, turn round quicker, and keep on longer.

Big head is no harm; let the body be big too.

We'll send you a little to try if you like.  
SCOTT & BOWNE, 409 Pearl street, New York.



fastened the badge in a place and at an angle that no woman would have chosen, but Miss Loomis forebore to change it for many a day.

"And haven't you a souvenir for me?" asked Mrs. Gresham, half jestingly.

"Of course I have!" and with ruthless fingers he tore two of the shiny buttons from the front of his blouse, and presented one to each, "I'd offer you one, Black, only—only—"

"I shall be wearing 'em before long," returned that individual with a determined nod.

Just then came the long expected order, "Company, attention!" and Mr. Whitman started with the obedience of the soldier, but somehow in the momentary confusion, the board-brimmed service hat threw Miss Loomis' face into shadow, and then—the men were tramping steadily into the cars.

The mad swirl of the cheering crowd swept between, and, seek as they would, his friends could not find him till, just as the last car was pulling by, they heard a hearty shout and saw a waving hat. There was an answering yell from Mr. Black, and the two ladies flourished their handkerchiefs frantically; but as the eddying dust shut out the red lights of the receding train they found other use for them.

Their hero had gone to war.—Charles Raymond Barrett.

#### A Sensible Woman.

A party of married men were talking about their wives, and it is worthy of note that every man was glad he had a wife and was anxious to tell of her good points, relates Wm. J. Lumpkin, in the September New Lippincott.

"I never heard my wife swear but once," said one of them when there seemed to be a lull in the praise meeting.

All the others looked shocked. If any of them had ever heard their wives swear, they were not telling it, and they resented the frankness of the one man who was apparently betraying family secrets. But the man did not regard the bad impression he had created.

"And that," he continued in the same tone, "was away back yonder, thirty years or more ago, when the oil excitement in Pennsylvania agitated the whole country. I owned a farm priced at a thousand dollars—not because it was worth that much, but because it was all I could get of a debt. My business was very small then, and \$1000 represented the bulk of my capital. I had been married five years, and my wife was the very best investment I had ever made. One day I received word that oil had been struck on the farm adjoining mine, and right away I proceeded to go crazy, just as everybody else did when oil showed up anywhere in the neighborhood. My wife showed signs, too, but she kept her wits about her. Inside of a week I began to get offers for my farm and I got crazier

every time there came an offer higher than the one before it. It went up like a balloon at first, until the figures got away up, and then the smaller bidders dropped out. At last an offer of \$100,000 came from the representative of a company that I knew was worth two or three millions.

"Let it go, John," said my wife, when I told her of this offer.

"I guess not," said I; "if it's worth \$100,000 to them, it's worth \$100,000 to me."

"I tell you to let it go," said my wife, as firm as a post in the ground.

"Not much," said I. "I'll get \$200,000."

"She pulled down her apron with a jerk, a peculiarity of hers when she meant business.

"You're getting a hundred times more for it than you gave," said she, "and you never expected to make \$100,000 in a hundred years, and you know it."

"But I'll make a good deal more than that now," I insisted, and started back to my desk to write a letter declining the offer.

"She pulled down her apron with a jerk that made the strings crack.

"John Martin," said she, "don't be a fool!"

"And I wasn't," concluded the narrator, "for I accepted the \$100,000 offer, and it was \$90,000 more than the company ever got off the farm, for the oil didn't seem to run that way."

#### Invited Guests.

A Crowd of Troubles passed him by,  
As he with courage waited;  
He said, "Where do you Troubles fly  
When you are thus belated?"

"We go," they said, "to those who mope,  
Who look on Life dejected—  
Who weakly say good-by to Hope—  
We go—where we're expected."

—Credit Lost.

Have you had a kindness shown?  
Pass it on.  
'Twas not given for you alone—  
Pass it on.  
Let it travel down the years,  
Let it wipe another's tears,  
Till in Heaven the deed appears.  
Pass it on.

#### DOMESTIC ECONOMY.

##### The Nut in Cooking.

**Peanut Salads and Sandwiches:** The peanuts, of which the small varieties are the best, must be fresh roasted and must be done to a turn. If in the slightest degree over-roasted, the flavor will be spoiled. For this reason, where they are much used it is best to buy the raw nuts and roast them at home in a shallow pan in the oven.

**Salted Peanuts:** Take the raw nuts and remove the shell and brown inner covering. Melt a tablespoonful of good butter in an agateware pan, or pie-plate. The nuts should just cover the bottom of the plate. Sprinkle with salt and place in a moderate oven. Watch carefully, stirring the nuts from time to time, so that all parts of them will come in contact with the butter and salt. When lightly browned and crisped on the outside they are done. The nuts should be prepared as they are needed, as they soon spoil and soften if kept on hand.

**Salted Almonds:** Prepared in same way as salted peanuts, the almonds being first bunched by pouring boiling water over them, when the brown skins will easily slip off.

**Almond and Raisin Cake Filling:** Blanch the almonds and chop them fine. Two-thirds of a cupful will be needed for a three-layer cake, and the same quantity of seeded and chopped raisins. Mix together and spread between the layers as soon as they are baked. Ice the cake on the top layer, and while the icing is soft, cover it with almonds, blanched and cut in four lengthwise strips. Let the almonds stand up at one end a little by pressing the other into the icing.

**Walnut Cake Filling:** Follow the

above receipt, taking English or black walnuts in place of almonds. Decorate the cake with walnuts cut in halves, pressed into the icing.

**Nut Cake:** Half a cupful of butter, three eggs, one cupful of sugar, two cupfuls of flour, two teaspoonfuls of baking powder, a few drops of almond or vanilla flavoring, and a cupful of chopped nuts of any preferred variety. Add sufficient milk to make a rather stiff batter, and bake in a moderately hot oven. Ice with plain white icing, decorate with whole or chopped nuts.

#### Dainty Ways of Serving Chicken.

**Cream of Chicken:** Any remnants of cooked chicken can be utilized for soup, but the smoothest and most delicately flavored creams come from boiling chicken purposely, and adding salt, peppercorns, one teaspoonful of minced onion, a bay leaf and sprig of parsley to the boiling water, and using only the white meat. Cook one tablespoonful of butter and two of flour together thoroughly; add one-half teaspoonful of salt, a blade of mace, dash of cayenne and three pints of the strained chicken stock, and stir constantly until it boils smooth; add one cupful each of hot milk and finely-minced white chicken meat; bring to a boil, remove mace, pour into tureen, add one cupful of whipped cream, and garnish with carrots cut in dice, green peas and celery tips.

**Chicken Fillets and Mushrooms:** Cut with boiling-size chicken into fillets, rub with sifted stale bread crumbs and saute in three tablespoonfuls of butter; nearly cover with boiling water and simmer one and one half hours; add one level teaspoonful of salt, a dash of cayenne, and grated yellow rind of half lemon, and simmer until tender. Make a smooth brown sauce of one heaping tablespoonful of butter and two tablespoonfuls of flour cooked together; add grating of nutmeg and one cupful of chicken stock, and when it boils smooth pour into the stewpan with the chicken and simmer ten minutes; add one cupful of mushrooms, cut in half, and heat through; lay the chicken neatly on serving platter, add one lightly beaten egg yolk to sauce and pour over the chicken.

**Chicken a La Terrapin:** Chop two cupfuls of cold roast chicken and one boiled sweetbread moderately fine; cook two tablespoonfuls of butter and one heaping tablespoonful of flour together until smooth; add salt, pepper and one cupful of cream, and stir until it boils smooth. Pour sauce into double boiler, add prepared meats; rub the yolks of three hard-boiled eggs to a smooth paste, with a little cream, and chop the whites fine. Just before serving, stir in the yolks and whites of eggs and three tablespoonfuls of sherry, turn into hot dish and garnish with fried bread points.

**Deviled Chicken:** Heat two tablespoonfuls each of butter and fine stale bread crumbs, add one-fourth teaspoonful each of salt and paprika, four drops of onion juice, one teaspoonful minced parsley and one-half cupful of cream; stir constantly until it boils; add two cupfuls of finely-minced

cooked chicken and one tablespoonful of lemon juice; remove from fire, add two hard-boiled eggs, put through sieve, stir well, put in shells or small cups, sprinkle with sifted buttered crumbs, and brown slightly in a quick oven.

**Chicken Pie with Oysters:** Joint a four-pound chicken, put in stewpan with liver, heart and gizzard, add one quart of boiling water, and as it begins to boil, skim very carefully; mix two heaping tablespoonfuls of flour with half a cupful of cold water, add one teaspoonful of minced onion, one level teaspoonful of salt and dash of pepper, and stir it into the stewpan; cover and simmer very slowly until tender; add two tablespoonfuls of butter, and let stand in the gravy until cold. Make soft baking powder biscuit dough, roll half inch thick, and cut into round or square individual cakes; spread half of them with soft butter, lay other half on top and bake. Mince white meat and second joint of the chicken very fine. Plump and ruffle six large oysters and cut in small pieces, rejecting hard muscle; mix with chicken and moisten with chicken gravy; pull cakes apart and spread each half with chicken mixture; lay top on, crust side downward; cover with chicken, and place in oven to heat through. Serve on platter, garnished with yolks of hard-boiled eggs put through vegetable press, and with chicken gravy in boat.

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## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Nov. 21, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

|                | Dec.            | Jan.            |
|----------------|-----------------|-----------------|
| Wednesday..... | 73 1/4 @ 72 1/4 | 73 1/4 @ 73     |
| Thursday.....  | 71 1/4 @ 72 1/4 | 72 1/4 @ 73 1/4 |
| Friday.....    | 72 1/4 @ 71 1/4 | 73 @ 72         |
| Saturday.....  | 71 1/4 @ 70 1/4 | 72 1/4 @ 71 1/4 |
| Monday.....    | 71 1/4 @ 70 1/4 | 72 1/4 @ 71 1/4 |
| Tuesday.....   | 70 @ 71 1/4     | 70 1/4 @ 72     |

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

|                | Dec.        | Mar.       |
|----------------|-------------|------------|
| Wednesday..... | 5s 11 1/2 d | 6s 0 1/2 d |
| Thursday.....  | 5s 11 1/2 d | 6s 0 1/2 d |
| Friday.....    | 5s 10 1/2 d | 6s 0 1/2 d |
| Saturday.....  | 5s 10 1/2 d | 6s 0 1/2 d |
| Monday.....    | 5s 11 1/2 d | 6s 0 1/2 d |
| Tuesday.....   | 5s 11 d     | 6s 0 1/2 d |

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

|                | Dec.            | May.                |
|----------------|-----------------|---------------------|
| Thursday.....  | 99 1/4 @ 99 1/4 | 1 06 3/4 @ 1 05 1/2 |
| Friday.....    | 98 1/4 @ 98     | 1 04 1/4 @ 1 04 1/4 |
| Saturday.....  | 97 3/4 @ 98     | 1 03 1/4 @ 1 04 1/4 |
| Monday.....    | 97 3/4 @ —      | 1 04 1/4 @ 1 03 1/4 |
| Tuesday.....   | 97 3/4 @ 98     | 1 03 1/4 @ 1 04 1/4 |
| Wednesday..... | 98 @ —          | 1 04 1/4 @ 1 04 1/4 |

## WHEAT.

There has been a dragging market for wheat most of the current week, and as is ordinarily the case when trade is slow, the bears or buying interest had the advantage. There was talk about Argentine crop conditions showing improvement, and of Russia wheat offering more freely, this and more of the same sort depressing values in Liverpool, Chicago and New York, with San Francisco following close in the procession. A queer and inconsistent feature of the market, but by no means new, is the depressing of California wheat by increased offerings from Russia, when a more natural sequence would be an improved feeling for our home product, as it is used largely in Europe to tone up the dark wheat. But the wheat market is not alone in this regard. Equally glaring inconsistencies are observable in the fluctuations of values for other cereals. One conspicuous illustration is seen in the barley market, where speculative values most of the time follow wheat, and in turn affect spot values. Beyond precedent, there is no reason whatever for barley values, speculative or actual, following in the trend of wheat. As well have the bean market here decline, because the price of rice in India had dropped a few points. The ocean freight market is easier, but this is to a great extent offset by the decline recently quoted in foreign wheat markets. The visible supply in this country east of the Rockies was reported at 62,391,000 bushels, an increase for the week of 1,688,000 bushels.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, 99 1/4 @ 97 3/4.  
May, 1901, delivery, \$1.06 3/4 @ 1.03 1/4.  
Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at 98c.; May, 1901, \$1.04 1/2 @ 1.04 1/2.

|                                     |                       |
|-------------------------------------|-----------------------|
| California Milling.....             | \$1 02 1/2 @ 1 07 1/4 |
| Cal. No. 1 shipping, alongside..... | 97 1/4 @ 1 00         |
| Oregon Valley.....                  | 97 1/4 @ 1 00         |
| Washington Blue Stem.....           | 1 00 @ 1 05           |
| Washington Club.....                | 97 1/4 @ 1 02 1/2     |
| Off qualities wheat.....            | 92 1/4 @ 95           |

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

|                      | 1899-1900.        | 1900-01.          |
|----------------------|-------------------|-------------------|
| Liv. quotations..... | 6s2d @ s-d        | 6s2d @ 6s3d       |
| Freight rates.....   | 33 1/2 @ 35s      | 40 @ 42 1/2 s     |
| Local market.....    | \$1 00 @ 1 02 1/2 | \$0 97 1/4 @ 1 00 |

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

Market shows an easy tone, without being quotably lower. Stocks are of only moderate volume, especially for the product of Oregon, Washington and other territory outside the State, but there is more than enough for immediate requirements. Owing to the low price of wheat in this center, these outside flours are at present at a disadvantage in competing with the home product.

|                                |               |
|--------------------------------|---------------|
| Superfine, lower grades.....   | \$2 25 @ 2 50 |
| Superfine, good to choice..... | 2 50 @ 2 80   |
| Country grades, extras.....    | 3 15 @ 3 40   |
| Choice and extra choice.....   | 3 40 @ 3 65   |
| Fancy brands, jobbing.....     | 3 60 @ 3 75   |
| Oregon, Bakers' extra.....     | 2 90 @ 3 25   |
| Washington, Bakers' extra..... | 2 90 @ 3 40   |

## BARLEY.

Market has been very quiet as a rule since last review, and absence of firmness has been a noteworthy feature. The liberal rain of the past week naturally imparted an easier feeling, no other market being more sensitive to weather influences. Quotable values were without pronounced change, but the tendency on feed descriptions was in favor of buyers, and there was little done in barley of any other sort. Chevalier is obtained only in a small way, and Browing barley is not being offered freely. The French bark Moliere, clearing this week for Europe, took 53,677 cents barley, value \$45,600.

|                                 |                   |
|---------------------------------|-------------------|
| Feed, No. 1 to choice.....      | 75 @ 77 1/2       |
| Feed, fair to good.....         | 70 @ 72 1/2       |
| Brewing, No. 1 to choice.....   | 80 @ 85           |
| Chevalier, No. 1 to choice..... | 97 1/4 @ 1 02 1/2 |
| Chevalier, No. 2.....           | 85 @ 90           |
| Chevalier, poor.....            | 70 @ 75           |

## OATS.

The movement is not brisk, buyers holding off as much as possible, but they are not able to operate to any better advantage in consequence. Most of the oats now here are in second hands, and cannot be sold at much less than current rates, except at a loss to holders. Stocks are largely Reds and Blacks. Supplies of Grays are very light.

|                               |                     |
|-------------------------------|---------------------|
| White Oats, fancy feed.....   | 1 37 1/4 @ 1 42 1/2 |
| White, good to choice.....    | 1 30 @ 1 35         |
| White, poor to fair.....      | 1 20 @ 1 27 1/2     |
| Gray, common to choice.....   | 1 20 @ 1 32 1/2     |
| Millings.....                 | 1 42 1/4 @ 1 45     |
| Surprise, good to choice..... | 1 40 @ 1 45         |
| Black Russian.....            | 1 12 1/4 @ 1 25     |
| Red.....                      | 1 15 @ 1 32 1/2     |

## CORN.

While supplies are of fair volume, as compared with the demand, stocks are by no means heavy, of either domestic or Eastern. The latter sort is most in evidence. Buyers take hold slowly at full current figures.

|                                      |                 |
|--------------------------------------|-----------------|
| Large White, good to choice.....     | 1 22 1/4 @ 1 25 |
| Large Yellow.....                    | 1 20 @ 1 22 1/4 |
| Small Yellow.....                    | 1 40 @ —        |
| Eastern, in bulk (carload lots)..... | 1 14 @ 1 17     |

## RYE.

The market is quiet at quotably unchanged values. Offerings and inquiry are both of limited volume.

|                          |             |
|--------------------------|-------------|
| Good to choice, new..... | 87 1/2 @ 90 |
|--------------------------|-------------|

## BUCKWHEAT.

There is a fair inquiry. A few transfers have been recently made within range of quotations.

|                     |             |
|---------------------|-------------|
| Good to choice..... | 1 80 @ 1 90 |
|---------------------|-------------|

## BEANS.

Arrivals show a marked decrease, as compared with several weeks preceding. White beans are being as a rule quite steadily held, but buyers are not taking hold freely at full current rates. Market for colored beans is quiet, and for Pinks inclines against sellers, this variety being in larger supply than any other colored bean. Limas are meeting with a moderate jobbing trade at unchanged values.

|                                  |             |
|----------------------------------|-------------|
| Pea, fair to good, 100 lbs.....  | 3 75 @ 4 00 |
| Small White, good to choice..... | 3 90 @ 4 15 |
| Lady Washington.....             | 2 90 @ 3 15 |
| Butter.....                      | 4 00 @ 4 50 |
| Pinks.....                       | 1 80 @ 2 00 |
| Bayos, good to choice.....       | 2 85 @ 2 80 |
| Reds.....                        | 2 50 @ 3 00 |
| Limas, good to choice.....       | 5 20 @ 5 30 |
| Black-eye Beans.....             | 3 00 @ 3 25 |
| Horse Beans.....                 | 1 75 @ 2 00 |
| Garbanzos, large.....            | 2 00 @ 2 25 |
| Garbanzos, small.....            | 1 25 @ 1 75 |

Recent advices by mail from New York give the following report of the bean market, prices quoted being per 60-lb. bushel:

For most kinds of beans the market has been slow all the week, and there has been further shrinkage in values, with a more or less unsettled feeling at the close. Stock has not come forward quite as freely as last week, but shippers are getting stock ready for market and it is believed that supplies this month will be liberal. Exporters are not disposed to operate very freely, and home buyers having supplied pressing necessities are inclined to hold off somewhat. Choice Marrow have settled to \$2.40, and there are more offering at the price than can be sold; it is possible that some lots might be shaded a little. Only a few Medium have arrived and these brought relatively full rates, but the situation at the close hardly warrants a quotation above \$2.20. Pea had some jobbing sales early in the week at \$2.05, but fell later to \$2, and it is doubtful that round lots in barrels could now be placed at a higher price, though the close clearance of stock within a day or two has resulted in some jobbing sales at \$2.02 1/2 @ 2.05. Most of the bag lots have sold for less than \$2. Orders for Red Kidney have come to hand slowly and receivers did not hesitate to accept \$2.40 for the best new stock; indeed the feeling at the present writing is weak at that. White Kidney still very scarce, and not many Yellow Eye to be had. Turtle Soup quiet. Lime have had fair trade and the

market closes a shade firmer; quotable \$3.55 @ 3.60. Green and Scotch peas of prime quality have held steady, but inferior grades, of which a considerable part of the supply consists, are easy.

## DRIED PEAS.

Market is lightly stocked and firm for both Green and Niles peas, more especially the first named. Some split peas are being landed here from the East by local millers.

|                             |             |
|-----------------------------|-------------|
| Green Peas, California..... | 2 60 @ 2 75 |
| Niles Peas.....             | 2 25 @ —    |

## WOOL.

A moderate amount of business is in progress, both in choice and defective wools, the latter being taken mainly by local scourers and the former principally for shipment East in the grease. In quotable values there are no changes to record. Buyers show a willingness to take hold rather freely at current rates, but when higher figures are demanded they refuse to purchase, claiming that conditions East will not justify them in paying more money.

## SPRING.

|                                      |         |
|--------------------------------------|---------|
| Humboldt and Mendocino.....          | 16 @ 17 |
| Northern, free.....                  | 14 @ 15 |
| Northern, defective.....             | 12 @ 13 |
| Middle Counties, free.....           | 14 @ 15 |
| Middle Counties, defective.....      | 11 @ 13 |
| Southern, 12 mos.....                | 8 @ 10  |
| Southern, free, 7 mos.....           | 9 @ 11  |
| Southern, defective, 7 mos.....      | 8 @ 9   |
| Oregon Valley, fine.....             | 17 @ 18 |
| Oregon Valley, coarse to medium..... | 16 @ 17 |
| Eastern Oregon, choice.....          | 13 @ 16 |
| Eastern Oregon, fair to good.....    | 10 @ 12 |
| Nevada, as to condition.....         | 11 @ 15 |

## FALL.

|                             |         |
|-----------------------------|---------|
| Humboldt and Mendocino..... | 11 @ 13 |
| Middle County.....          | 9 @ 10  |
| San Joaquin.....            | 7 @ 9   |
| San Joaquin Lambs.....      | 8 @ 9   |

## HOPS.

There is not much doing, and nothing to indicate that either buyers or sellers are anxious to do business at the expense of granting concessions to the opposite side. There are no heavy offerings in this center from growers' hands, especially of desirable qualities. Most of the jobbers and brewers appear to be fairly well stocked for the time being.

|                               |             |
|-------------------------------|-------------|
| Good to choice 1900 crop..... | 13 1/4 @ 16 |
|-------------------------------|-------------|

The following review of the hop market is from a New York authority, published under recent date and coming through by mail:

In the interior markets of this State there has been steady, and on the whole rather free, buying again this week, and while prices for top grades have made no further advance the range of values has narrowed somewhat, medium qualities showing some improvement. Sales have been at 15 @ 18c in most sections, but 19 @ 20c was paid for very choice growths in what is considered the best locality this year. On the Pacific coast there has also been a free movement of stock at full prices. Coupled with these strong influences have been still firmer cable advices from the English markets, and the interest shown by exporters in our hops has given the situation here a very healthy look. Business with brewers was interrupted somewhat by the national election, but they have been inclined to take on more hops, and have paid full rates for the qualities wanted. Our slightly revised quotations cover the transactions reported in 1900 hops, and a firm feeling prevails. Of the 1899 hops but few remain in first hands, and when sold they bring full former prices. The older growths do not share much in the trade.

## HAY AND STRAW.

Market has been quiet most of the current week, rainy weather interfering with consignments coming forward, and also causing buyers to proceed more slowly. While the market was not so firm in tone as prior to the rain, there was no reduction in quotable prices. With the comparatively light stocks now in sight, there should be no trouble in maintaining current rates.

|                    |              |
|--------------------|--------------|
| Wheat.....         | 9 00 @ 13 00 |
| Wheat and Oat..... | 9 00 @ 12 00 |
| Oat.....           | 8 00 @ 12 00 |
| Barley.....        | 7 00 @ 9 00  |
| Volunteer.....     | 6 00 @ 7 50  |
| Alfalfa.....       | 8 00 @ 9 50  |
| Stock.....         | 5 50 @ 7 00  |
| Compressed.....    | 9 00 @ 13 00 |
| Straw, 3 bale..... | 35 @ 45      |

## MILLSTUFFS.

Market was quite well supplied with Bran and prices remained about as favorable to buyers as last quoted. Middlings and Shorts were offered at unchanged figures and moved slowly. Rolled Barley inclined in favor of buying interest. Milled Corn was steadily held.

|                     |               |
|---------------------|---------------|
| Bran, 3 ton.....    | 13 50 @ 14 50 |
| Middlings.....      | 16 50 @ 19 00 |
| Shorts, Oregon..... | 14 00 @ 15 50 |
| Barley, Rolled..... | 16 00 @ 16 50 |
| Cornmeal.....       | 28 00 @ —     |
| Cracked Corn.....   | 27 00 @ —     |

## SEEDS.

Business in this line is exceedingly light, mainly due to very limited supplies. Alfalfa seed is offering at slightly easier rates than last quoted. Most of the Flaxseed coming forward is being delivered on contract.

|                          | Per ctt.      |
|--------------------------|---------------|
| Mustard, Trieste.....    | — @ —         |
| Mustard, Yellow.....     | — @ —         |
| Flax.....                | 2 00 @ 2 50   |
| Alfalfa, Utah.....       | 9 1/4 @ 9 1/2 |
| Alfalfa, California..... | 8 @ 8 1/2     |
|                          | Per lb.       |
| Canary.....              | 3 1/4 @ 4     |
| Rape.....                | 2 @ 3         |
| Hemp.....                | 3 1/4 @ 4     |

## BAGS AND BAGGING.

The Grain Bag market is not showing any activity, but presents a moderately firm tone, importers and local manufacturers wearing a more cheerful look since the recent rain. Values for Wool Sacks, Bean Bags and Fruit sacks remain nominally as last quoted, with nothing of consequence doing in either.

|                                             |               |
|---------------------------------------------|---------------|
| Calcutta Grain Bags, buyer June-July.....   | 6 1/4 @ 6 1/2 |
| Calcutta Grain Bags, spot.....              | 6 @ —         |
| San Francisco Grain Bags, 22x36, spot.....  | 5 1/2 @ 6     |
| State Prison Bags in lots of 2000, 300..... | — @ —         |
| Wool Sacks, 4 Ds.....                       | — @ 32 1/2    |
| Wool Sacks, 3 1/2 Ds.....                   | — @ 28 1/2    |
| Fleece Twine.....                           | 7 1/2 @ —     |
| Gunnies.....                                | — @ 12 1/2    |
| Bean Bags.....                              | 4 1/2 @ 5 1/4 |
| Fruit Sacks, cotton.....                    | 6 1/4 @ 7 1/4 |

## HIDES, PELTS AND TALLOW.

Hide market is ruling steady at the recent advance. Pelts are in fair request, but not quotably higher. Business doing in Tallow is at unchanged figures, but more than is offering could be placed.

## HONEY.

Market is seldom more lightly stocked than at present, and is firm at current rates. Offerings are principally amber grades, choice to select water white honey being a rarity at present, as it has been, in fact, most of the current season. A shipment of 90 cases honey went forward per steamer to British Columbia.

|                              |                 |
|------------------------------|-----------------|
| Extracted, White Liquid..... | 7 1/4 @ 8       |
| Extracted, Light Amber.....  | 6 1/2 @ 7 1/4   |
| Extracted, Amber.....        | 5 1/2 @ 6 1/4   |
| White Comb, 1 lb frames..... | 13 @ 14         |
| Amber Comb.....              | 11 1/4 @ 12 1/4 |
| Dark Comb.....               | 8 @ 9           |

## BEESWAX.

Current values are being well maintained. No trouble is experienced in securing custom for all good stock presented for sale.

|                                 |         |
|---------------------------------|---------|
| Good to choice, light, 3 D..... | 28 @ 28 |
| Dark.....                       | 24 @ 25 |

## LIVE STOCK AND MEATS.

Market for Beef is showing firmness, with offerings moderate and demand good. Mutton is selling to very fair advantage, immediate supplies not being excessive. Lamb was in light receipt and brought good figures. Veal of desirable size was favored with prompt custom at full current rates. Hog market was steady for good to choice packing stock, with slightly increased offerings.

|                                            |               |
|--------------------------------------------|---------------|
| Beef, first quality, dressed, net 3 D..... | 6 1/2 @ 7     |
| Beef, second quality.....                  | 6 1/4 @ 6 1/2 |
| Beef, third quality.....                   | 6 @ —         |
| Mutton—ewes, 7 @ 7 1/4; wethers.....       | 7 1/4 @ 8     |
| Hogs, hard grain fed, medium.....          | 5 1/2 @ 5 1/2 |
| Hogs, small, fat.....                      | 5 1/4 @ 5 1/2 |
| Hogs, large, hard.....                     | 5 1/4 @ —     |
| Hogs, feeders.....                         | 5 @ 5 1/4     |
| Hogs, country dressed.....                 | 6 1/4 @ 7     |
| Veal, small, 3 D.....                      | 8 @ 10        |
| Veal, large, 3 D.....                      | 8 1/4 @ 9     |
| Lamb, spring, 3 D.....                     | 8 1/2 @ 9     |

## POULTRY.

Market showed little change from previous week and was in the main favorable to buyers. Eastern poultry was in fair receipt, the equivalent of nearly a carload a day having been lately landed on this market. At or near the same figures, Eastern is given the preference, as the fowls average larger than domestic. Broilers and Fryers were the only kinds of chickens bringing good prices. In the matter of demand, Turkeys will take the lead the coming week. At close, owing to stormy weather, the poultry market was lightly stocked and showed more firmness.

|                                   |             |
|-----------------------------------|-------------|
| Turkeys, live hens, 3 D.....      | 13 @ 14     |
| Turkeys, live gobblers, 3 D.....  | 13 @ 14     |
| Turkeys, dressed, per lb.....     | 14 @ 17     |
| Hens, California, 3 dozen.....    | 3 50 @ 4 50 |
| Roosters, old.....                | 3 50 @ 4 00 |
| Roosters, young (full-grown)..... | 4 00 @ 4 50 |
| Fryers.....                       | 3 50 @ 4 00 |
| Broilers, large.....              | 3 50 @ 4 00 |
| Broilers, small.....              | 3 00 @ 3 50 |
| Ducks, old, 3 dozen.....          | 3 00 @ 4 00 |
| Ducks, young, 3 dozen.....        | 4 00 @ 5 00 |
| Geese, 3 pair.....                | 1 75 @ 2 00 |
| Goslings, 3 pair.....             | 1 75 @ 2 00 |
| Pigeons, old, 3 dozen.....        | 1 00 @ —    |
| Pigeons, young.....               | 1 50 @ 1 75 |

## BUTTER.

The market has taken a turn for the better, not so much in the matter of prices as in demand. Choice to select fresh is in very fair request at current figures, with



select in light stock, and some sales of the same are made above quotable rates. There is still a surfeit of low-grade fresh, however, and market for this sort continues weak. Packed and cold storage butter is being offered freely, with movement in the same light.

|                                      |           |
|--------------------------------------|-----------|
| Creamery, extras, # lb.              | 22 1/2 @— |
| Creamery, firsts                     | 21 @22    |
| Creamery, seconds                    | 20 @21    |
| Dairy, select                        | 21 @22    |
| Dairy, seconds                       | 18 @19    |
| Dairy, soft and weedy                | — @—      |
| Mixed store                          | 16 @17    |
| Creamery in tubs                     | 20 @22    |
| Pickled Roll                         | 20 @21    |
| Firkin, California, choice to select | 20 @21    |
| Firkin, common to fair               | 17 @18    |

## CHEESE.

The market as a whole shows healthy condition, there being no heavy stocks of any description and a very fair demand. Especially is mild-flavored new of high grade salable to advantage, such being offered at present very sparingly.

|                              |            |
|------------------------------|------------|
| California, fancy flat, new  | 11 @12     |
| California, good to choice   | 10 @11     |
| California, fair to good     | 9 1/2 @10  |
| California Cheddar           | — @—       |
| California, "Young Americas" | 10 @12 1/2 |

## EGGS.

Market has been in a little better shape for the selling and producing interest than immediately prior to close of last week. Owing to the rainy weather, arrivals from most California points showed considerable decrease. The easier figures ruling caused an improved demand. Small or pullets' eggs, however, met with slow custom. Fresh Eastern were not in large receipt, but cold storage eggs continued to be offered freely.

|                                            |                |
|--------------------------------------------|----------------|
| California, select, large, white and fresh | 34 @36         |
| California, select, irregular color & size | 27 1/2 @32 1/2 |
| California, good to choice store           | 24 @27         |
| Eastern, as to section and grading         | 21 @26         |
| Eastern, cold storage                      | — @—           |

## VEGETABLES.

Changes effected in values the past week were in the main to firmer figures. Prices for Onions continue on the up grade, and there is no indication that they have yet touched zenith figures for the season. Peas and Beans of good quality brought good prices. Only small quantities of Egg Plant were received, all coming from Los Angeles. Tomatoes of desirable quality made such a light showing as to be hardly quotable.

|                                    |            |
|------------------------------------|------------|
| Beans, String, # lb.               | 4 @ 6      |
| Beans, Wax, # lb.                  | 4 @ 6      |
| Beans, Lima, # lb.                 | 3 @ 4      |
| Cabbage, choice garden, # 100 lbs. | 1 00 @1 25 |
| Cauliflower, # dozen               | 50 @—      |
| Cucumbers, Bay, # box              | 30 @ 60    |
| Egg Plant, # lb.                   | 7 1/2 @ 10 |
| Garlic, # lb.                      | 4 1/2 @ 5  |
| Onions, Yellow Danver, # cental    | 1 35 @1 50 |
| Peas, Sweet, garden, # lb.         | 4 @ 6      |
| Peppers, Green Chile, # box        | 35 @ 60    |
| Tomatoes, River, # large box       | 50 @1 00   |

## POTATOES.

While receipts of potatoes were not especially heavy, the demand most of the week was of a slow order, and market was not noteworthy for firmness, especially for the ordinary run of offerings. Values for choice to select Burbanks were tolerably well sustained at the figures quoted. Sweeters were in more than ample supply for the immediate demand, which is not brisk, despite low asking rates.

|                                  |          |
|----------------------------------|----------|
| Burbanks, River, # cental        | 30 @ 60  |
| Burbanks, Petaluma-Tomales       | 35 @ 60  |
| Burbanks, Salinas, # cental      | 90 @1 25 |
| Burbanks, Oregon, # cental       | 55 @ 90  |
| Sweet Potatoes, Yellow, # cental | 50 @1 00 |

## The Fruit Market.

## FRESH FRUITS.

The market for fresh deciduous fruits is showing rather quiet condition, as is ordinarily the case at this time of year. Apples are in very fair supply, but the proportion of offerings of choice to select is light. Most desirable qualities are meeting with a moderately firm market, some very select commanding above quotable rates, but for common qualities the market is dull and weak and bids fair to so continue. Peas are without quotable change, but strictly select Winter Nels are about the only sort which can be said to be especially sought after. Grapes have nearly had their day for the current season; although there are few offering, they do not meet with active inquiry. Persimmons moved slowly at rather easy figure. Pomegranates were too scarce to be quotable. Strawberries were in slim receipt, and such as showed good condition brought comparatively stiff figures.

|                                     |             |
|-------------------------------------|-------------|
| Apples, fancy, 4-tier box           | 1 25 @ 1 50 |
| Apples, good to choice, # 50-lb box | 65 @ 1 00   |
| Apples, common to fair, # 50-lb box | 25 @ 50     |
| Grapes, Tokay, # box                | 60 @ 1 25   |
| Grapes, Black, # box                | 60 @ 1 25   |
| Grapes, Muscat, # box               | 60 @ 1 25   |
| Raspberries, # chest                | 5 00 @ 7 00 |
| Pears, Winter Nels, # box           | 60 @ 1 25   |
| Pears, common kinds, # box          | 30 @ 75     |

|                                  |             |
|----------------------------------|-------------|
| Persimmons, # box                | 50 @ 1 00   |
| Quinces, # box                   | 40 @ 75     |
| Strawberries, Longworth, # cbest | — @—        |
| Strawberries, Large, # cbest     | 6 00 @ 7 00 |
| Whortleberries, # lb.            | — @—        |

## DRIED FRUITS.

The same inactivity as previously noted continues to prevail in the market for cured and evaporated fruits, so far as transfers from first hands are concerned. That the existing monotonous condition will develop material change in the near future, or until after the mid-Winter holidays, does not now appear probable. It is by no means phenomenal to have dull trade in dried fruits during November and December, it having been the exception during past seasons where any special activity has been experienced during the last two months of the year. There are no special changes to record in quotable values, but they must for the time being be regarded as largely nominal, representing, as nearly as it is possible to do so, the minimum of prices according to the views of holders, and the maximum of values as gauged by the ideas of wholesale operators. Packers and jobbers are doing a moderate business, but could readily do more without making any noteworthy additions to the stocks they are now carrying. Aside from small quantities of Pears and Prunes going forward to Germany, the export movement at present is of insignificant proportions. As to the quantity of non-Association Prunes still on the market, statements vary considerably, but, according to the lowest estimates, there are enough to admit of some wholesale trading, these non-Association Prunes being now held mainly in districts outside of the Santa Clara valley.

## EVAPORATED OR BLEACHED.

|                                                     |               |
|-----------------------------------------------------|---------------|
| Apricots, Royal, prime                              | 6 1/2 @ 7     |
| Apricots, Royal, choice, in sacks, # lb.            | 7 1/2 @ 8     |
| Apricots, Royal, fancy                              | 9 @—          |
| Apricots, Moorpark                                  | 9 1/2 @11 1/2 |
| Apples, in 50-lb boxes, rings, pressed, fancy       | 5 1/2 @ 5 1/2 |
| Apples, 50-lb boxes, rings, pressed, good to choice | 3 1/2 @ 4 1/2 |
| Figs, White, fancy pressed                          | 6 @ 7         |
| Nectarines, # lb.                                   | 4 @ 6         |
| Peaches, unpeeled, fancy                            | 6 @ 6 1/2     |
| Peaches, unpeeled, choice                           | 5 @ 5 1/2     |
| Peaches, peeled, in boxes                           | 11 @14        |
| Pears, unpeeled Bartlett's, balved, fancy           | 5 @ 6         |
| Pears, balved, unpeeled Bartlett's                  | 3 1/2 @ 4 1/2 |
| Pears, quartered, unpeeled Bartlett's               | 3 1/2 @ 4 1/2 |
| Plums, Black, pitted                                | 4 @ 5         |
| Plums, White and Red                                | 5 @ 6         |
| Prunes, Silver                                      | 4 1/2 @ 6     |

## COMMON SUN-DRIED.

|                   |               |
|-------------------|---------------|
| Apples, sliced    | 2 @ 3         |
| Apples, quartered | 2 @ 3         |
| Figs, Black       | 1 1/2 @ 2 1/2 |
| Figs, White       | 2 1/2 @ 3 1/2 |
| Peaches, unpeeled | 4 @ 5         |

Prices for new crop Prunes, as named by the California Cured Fruit Association: Santa Clara, four sizes, 3c. per lb.: 40-50s, 7c.; 50-60s, 5 1/2c.; 60-70s, 3 1/2c.; 70-80s, 3 1/4c.; 80-90s, 2 3/4c.; 90-100s, 2 1/4c.; 100-120s, 2c., which is the uniform price for this grade; Sonomas, other than smallest, 1/2c. less; other districts, 1/4c. less, except for smallest; Ruby, 1/4c. premium.

Advices by mail of recent date from New York City furnish the following review of the dried fruit market:

The market for apples has continued quiet, largely owing to the light stocks available, but prices have steadily improved on evaporated as speculators have wanted stock to cover old contracts, and at the close strictly prime are not obtainable under 5c, though some stock just under prime is selling at 4 1/2 @ 4 3/4c, with poorer grades lower. Choice and fancy have a moderate jobbing demand at about former rates. Sun-dried apples in light supply and firm, and chops and waste also held with confidence at full late prices. Small fruits of all kinds in limited supply and firm with prices generally showing an advance. California fruit has ruled dull with outside figures full and only reached for very attractive stock.

|                                               |           |
|-----------------------------------------------|-----------|
| Apricots, Cal., Moorpark, 1900                | 10 @15    |
| Apricots, Cal., Royal, 1900, # lb.            | 8 @ 9     |
| Peaches, Cal., unpeeled, 1900, in bxs, # lb.  | 7 @ 9 1/2 |
| Peaches, Cal., unpeeled, 1900, in bags, # lb. | 7 @ 9     |
| Prunes, Cal., 1899, # lb.                     | 4 @ 8 1/2 |

## RAISINS.

While there is no extensive movement in Raisins of any description at present, the market shows healthy tone, with stocks comparatively light and almost wholly under Association control. Sultanas and Seedless are scarce. Present offerings are principally standard loose Muscatels of the medium grades.

## F. O. B. FRESNO DELIVERY.—CARLOAD LOTS.

|                                         |         |
|-----------------------------------------|---------|
| Imperial Clusters, 6-crown, # 20-lb box | 3 00 @— |
| Dehesa Clusters, 5-crown                | 2 50 @— |
| Fancy Clusters, 4-crown                 | 2 00 @— |
| London Layers, 3-crown, # box           | 1 60 @— |
| do do 2-crown, # box                    | 1 50 @— |

(Usual advance for fractions.)

|                                         |           |
|-----------------------------------------|-----------|
| Loose Muscatel, 4-crown standard, # lb. | — @ 7     |
| Loose Muscatel, 3-crown                 | — @ 6 1/2 |
| Loose Muscatel, 2-crown standard        | — @ 6     |
| Loose Muscatel, seedless                | — @ 6 1/2 |

(Above prices for loose raisins are for 50-lb boxes.)

Thompson Seedless.—Bleached fancy, # lb., 12c;

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## OLIVER STEEL PLOWS.

choice, 11c; standard, 10c; prime, 9c. Unbleached, 9c.

Sultanas.—Bleached fancy, # lb., 10 1/2c; choice, 9 1/2c; standard, 8 1/2c; prime, 8c. Unbleached, 8c.

## CITRUS FRUITS.

Oranges are in good supply for this early date. It would be much better, however, if the quantity offering was lighter and the quality finer. With most of the oranges unripe and the weather the greater part of the week cool and stormy, it can be readily seen that the conditions were unfavorable for a free movement of this fruit. Lemons of common quality continue plentiful, but stocks of choice are far from heavy, and the latter sell fairly well. Lime market was quiet at quotably unchanged values.

|                                  |            |
|----------------------------------|------------|
| Oranges—Navel, # box             | 1 50 @3 00 |
| Valencia, # box                  | — @—       |
| Seedlings, # box                 | 1 00 @2 00 |
| Tangerines, # box                | 1 00 @2 00 |
| Grape Fruit, # box               | 2 00 @3 50 |
| Lemons—California, select, # box | 2 25 @2 50 |
| California, good to choice       | 1 50 @2 00 |
| California, common to fair       | 50 @1 00   |
| Limes—Mexican, # box             | 4 00 @4 50 |
| California, small box            | 50 @ 75    |

## NUTS.

There is a fair jobbing trade in Almonds and Walnuts at previously established figures, but offerings from first hands, although rather limited, are not receiving much attention. The percentage of second class Walnuts has proven comparatively heavy this season, and for this sort the market is weak.

|                                        |                |
|----------------------------------------|----------------|
| California Almonds, shelled            | 24 @27         |
| California Almonds, paper shell, # lb. | 13 @15         |
| California Almonds, soft shell         | 10 1/2 @12 1/2 |
| California Almonds, hard shell         | 6 @ 7          |
| Walnuts, White, soft shell             | 8 1/2 @10 1/2  |
| Walnuts, White, California, standard   | 7 1/2 @10      |
| Chestnuts, California Italian          | 6 @ 8          |
| Peanuts, California, fair to prime     | 4 @ 5          |
| Peanuts, Eastern, hand-picked          | 5 1/2 @ 6      |
| Pine Nuts                              | 5 @ 6          |

## WINE.

There is a moderate business doing in new dry wines within range of figures last quoted, 14 @18c. per gallon, as to quality, in collars or delivered at nearest railroad station. Some Sonoma wine of good average quality was offered at 15c. The Wine Dealers' Association has advanced the price of held wines in Eastern markets 2 1/2c. per gallon on dry and 5c. per gallon on sweet wines. The Panama steamer sailing Monday carried 113,093 gallons and 137 cases wine, most of the shipment being destined for New York.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

| FOR THE WEEK.    | Since<br>July 1, 1900. | Same time<br>last year. |
|------------------|------------------------|-------------------------|
| Flour, 1/2 sacks | 175,698                | 2,380,615               |
| Wheat, centals   | 190,031                | 2,294,949               |
| Barley, centals  | 64,851                 | 2,159,877               |
| Oats, centals    | 26,745                 | 412,681                 |
| Corn, centals    | 4,820                  | 40,100                  |
| Rye, centals     | —                      | 91,922                  |
| Beans, sacks     | 49,555                 | 392,873                 |
| Potatoes, sacks  | 39,814                 | 634,330                 |
| Onions, sacks    | 4,761                  | 107,251                 |
| Hay, tons        | 2,450                  | 82,394                  |
| Wool, bales      | 881                    | 18,585                  |
| Hops, bales      | 170                    | 5,178                   |

## EXPORTS BY SEA.

| FOR THE WEEK.      | Since<br>July 1, 1900. | Same time<br>last year. |
|--------------------|------------------------|-------------------------|
| Flour, 1/2 sacks   | 61,080                 | 1,281,224               |
| Wheat, centals     | 69,531                 | 2,119,194               |
| Barley, centals    | 134                    | 1,315,467               |
| Oats, centals      | 15                     | 46,554                  |
| Corn, centals      | 454                    | 474                     |
| Beans, sacks       | 123                    | 6,459                   |
| Hay, bales         | 36                     | 77,973                  |
| Wool, pounds       | —                      | 233,621                 |
| Hops, pounds       | 17,338                 | 309,722                 |
| Honey, cases       | 90                     | 1,557                   |
| Potatoes, packages | 3,211                  | 38,813                  |

## California Dried Fruit at New York.

NEW YORK, Nov. 21.—Evaporated apples, common, 3 @4c; prime wire tray, 4 1/2 @5 1/2c; choice, 5 1/2 @6c; fancy, 6 @6 1/2c.

California dried fruits.—Trade is light, and only for best qualities does the market show any firmness.

Prunes, 3 1/2 @8 1/2c.

Apricots, Royal, 11 @14c; Moorpark, 15 @17c.

Peaches, unpeeled, 6 @9c; peeled, 16 @20c.

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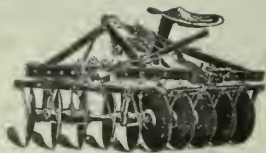
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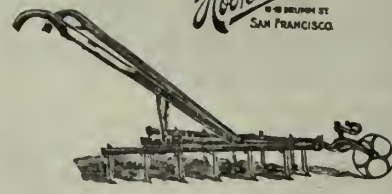
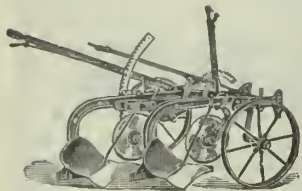
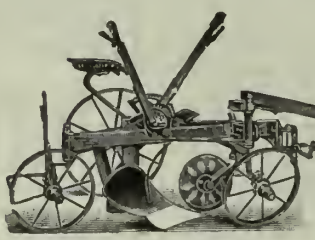
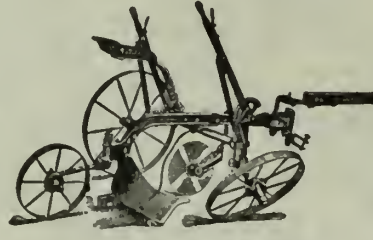
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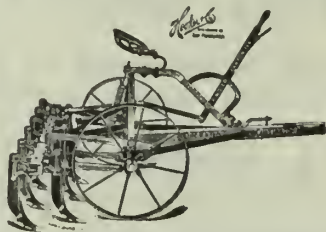
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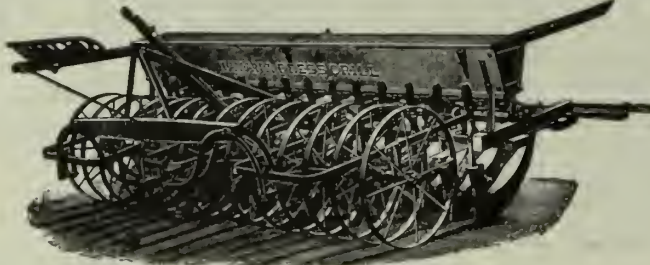
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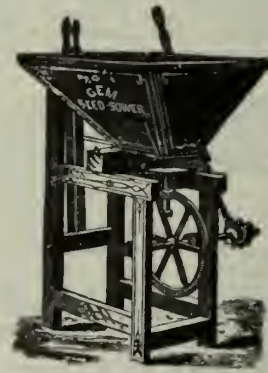
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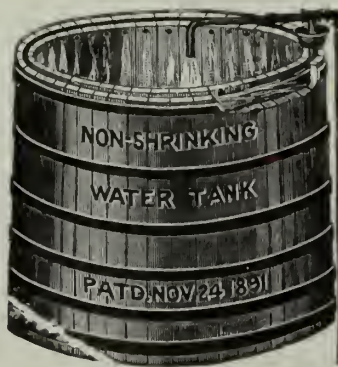
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London a Great Market for California.

London has met the extraordinary heat of the summer by taking to fruit eating on a scale never before known. The Westminster Gazette, in describing the rush of people in the city for the fruit stalls during the hot days, says:

"Ice cream has lost its vogue somewhat, owing to suspicions of bacilli in the eggs, and so in the blaze the hot man's fancy lightly turns to William pears. Ludgate Hill, the center of the city's peripatetic trade, has become an orchard of early apples and glossy plums, while the latest delicacy is 'California cherries, gents and ladies, just the very sime as y' p'ys two bob a pahnd for in Covin Garden—'ere tuppence a 'alf pahnd, me Lord.' And when the thirsty passer-by lingers, doubting the propriety of busying in such style, he is encouraged by the kindly assistant who remarks, 'I'll put 'em in newspiper for y', captain, an' y' kin stow 'em in y'r 'at.'"

It is to be hoped that, having been started on a fruit diet by the hot weather, the good folks of London will stick to it with a true British pertinacity. We say this not only in the interest of fruit producers, but of consumers. It is gratifying, moreover, to learn that the favorite fruit goes by the name of "California cherry." It is to be doubted, however, whether the genuine California dainty can be sold there at "tuppence a 'alf pahnd" by even the most enterprising street vendor, but that is a side issue. The good citizen is benefiting London and advertising California fruit at the same time—and both of these things are commendable.

When better facilities of transportation are provided, there will be an immense market for fresh California fruit in all the British cities. Even now the trade is an increasing one, and it will be seen from the report we have quoted that California fruit is the favorite. We have established the brand and it carries the trade. By and by we may establish a similar demand for California wine. London will not be afraid to take it up simply because it lacks a French label. Thus the severely hot season may be working out a benefit for us in more ways than one. Season after season let us hope that the Cockney vendor may have occasion to cry, as the Gazette reports him: "Ere y', are, noble marquis, Californy cherries a penny a bag, enough to squench y'r noble thirst an' leave some good 'uns still for the little marquizzies at 'ome. Sold again an' got the money."—San Francisco Call.

**Demand Will Take All of the Prune Product.**

The price of prunes in all parts of the United States, says the San Jose Herald, has touched the price fixed by the Cured Fruit Association, and it is now impossible to buy in any market a pound of prunes below the price fixed by the San Jose association.

In speaking of the matter, President

**How's This?**

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O.  
We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRAU, Wholesale Druggists, Toledo, O.  
WALDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75c. per bottle. Sold by all Druggists. Testimonials free.  
Hall's Family Pills are the best.

Bond stated that it was now more than apparent that the demand would be sufficient to require the whole of the year's product and that fully one-third of it has at the present time been disposed of. Of this, he states, a great portion has been shipped to Europe, where it has attracted a great deal of complimentary attention.

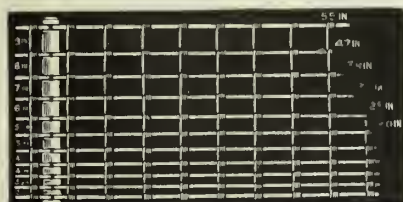
A number of boxes and cans of cured prunes in the windows of the directors' office engage the attention of passers-by and elicit many complimentary expressions for the beauty of the fruit and the attractive manner in which it is packed. The sealed cans are a new method of packing, and they are intended chiefly for tropical countries, although prunes thus packed are being shipped to all markets. The cans in the windows of the association offices hold five pounds each, but the fruit is packed in cans of several sizes.

**Orange and Lemon.**

The citrus fruit shipments from southern California for the season which has just begun will, it is expected, aggregate a total of 25,625 cars. The estimates of the new crop have been compiled by the transcontinental roads and the figures in carload lots are as follows:

|                    |        |
|--------------------|--------|
| Ontario .....      | 10,000 |
| Redlands .....     | 2,000  |
| Highland .....     | 500    |
| Rialto .....       | 200    |
| Colton .....       | 300    |
| Riverside .....    | 5,000  |
| Pomona .....       | 1,200  |
| Azusa .....        | 1,100  |
| Covina .....       | 600    |
| Duarte .....       | 500    |
| Lordsburg .....    | 100    |
| Claremont .....    | 200    |
| San Gabriel .....  | 350    |
| San Dimas .....    | 200    |
| Downey .....       | 250    |
| Glendora .....     | 100    |
| San Fernando ..... | 100    |
| San Diego .....    | 500    |
| Orange .....       | 500    |
| Santa Ana .....    | 300    |
| Anaheim .....      | 200    |
| Fullerton .....    | 700    |
| Pasadena .....     | 400    |
| Ventura .....      | 300    |
| Hemet .....        | 25     |

These figures include both the orange and lemon crops for the southern end of the State.



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Sheep, fire and water and snow drift proof.  
The fence that fences—Cheap and lasts a lifetime—

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FIELD AND HOG FENCE**

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5-FOOT. WEIGHT, 300 LBS.

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**Prune Dip.**

"Greenbank" Powdered Caustic Soda  
and Pure Potash.

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WE WILL EXHIBIT ORANGES, LEMONS, LIMES, GRAPES,  
RAISINS, PEACHES, PRUNES, PEARS, APPLES AND FIGS  
THAT WE WILL CHALLENGE THE WORLD TO EXCEL.

**THE LIVE STOCK AND DAIRY EXHIBIT WILL ASTONISH YOU.  
DON'T FAIL TO SEE THIS FAIR.**

For premium list and general information, write or call or

**A. E. MIOT, Secretary, Tulare, Cal.**

**GRAPES PRUNES WHEAT PEACHES**

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SUBDIVISIONS**

—OF THE—

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Near Chico, Butte County, California,

Are now offered for sale in lots of from 5 TO 40 ACRES. This is the most fertile body of land ever placed on the market, and is located in the **FINEST FRUIT SECTION IN THE STATE.** It is a living testimonial of the varied fruit and cereal productions that can be grown in the State.

Read What Can Be Grown on This Land

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FOR DESCRIPTIVE TREATISE, TERMS, ETC.,

Address **B. CUSSICK, Agent,**  
**CHICO, BUTTE COUNTY, CALIFORNIA.**

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**If You Want to Make the Best Butter**

that can be made from good cream, buy and use the

## Squeezer

COMBINED

## Churn and Worker.

It is the most exhaustive churn and takes out all the butter fat in cream, at either high or low temperature. It is free from friction and does not grind or smear the butter. It both makes and preserves perfect grain. It squeezes—presses out the milk and water as it were. Distributes the salt with absolute evenness, preventing all spotted or mottled butter. Then too, it is so easy to operate and so easy to clean. This size is for the dairy, but we make factory sizes as well. We repair promptly all separators and any kind of dairy and creamery machinery.

Send for Catalogue No. 81

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NEW EDITION (3rd)

By E. J. WICKSON.

Professor Agricultural Practice University of California; Author of "California Vegetables in Garden and Field;" President California State Floral Society; Horticultural Editor Pacific Rural Press of San Francisco.

Large Octavo; 470 Pages; Profusely Illustrated, 12 Full-Page Plates.

The third edition of this great work and indispensable companion of progressive fruit growers is now ready for immediate delivery.  
The book has been practically rewritten by the author, and contains the latest and best methods of practice on the subjects of which it treats.

**Price \$2.50, Postpaid Anywhere.**

**PACIFIC RURAL PRESS, Publishers,**

330 Market Street, San Francisco, Cal.





## Patrons of Husbandry.

### Tulare Grange.

The regular meeting of Tulare Grange was held in its hall on Saturday. The third and fourth degrees were conferred on a class of two, after which all repaired to the banquet hall and had an enjoyable harvest feast.

After the banquet the officers for the ensuing year were elected: Frank Styles, Worthy Master; Morphew Jacob, Overseer; John Tuohy, Lecturer; E. C. Shoemaker, Steward; Bro. Eckels, Assistant Steward; Sister Fleming, Chaplain; Julius Forrer, Treasurer; Bertha I. Morris, Secretary; Kate Mull, Pomona; Sister Weaver, Flora; Nellie Scott, Ceres; Sister Slaughter, Lady Assistant Steward.

Bro. Shoemaker was requested to write to Bro. Winans that if his work brings him in this vicinity in January to visit this Grange and install its officers.

Bro. Thos. Jacob was elected a delegate to represent Tulare Grange in the State Fruit Growers' annual convention to meet in San Francisco on December 4th.

The following resolutions were then passed:

Resolved, The good results in the price obtained for our prunes by the Cured Fruit Association is an instructive lesson in the efficiency of the organization.

Resolved, Our representative to the State Fruit Growers' Convention, to meet in San Francisco on December 4th next, is hereby requested to urge upon the convention and the fruit growers present, that the sale of all deciduous and dried fruits in California be made through the Cured Fruit Association, or some similar efficient organization, at a price to be fixed by it, which will be just to the consumer and afford a reasonable profit to the producer.

The special subject for the day's consideration, "What is the Duty of the Grange in the Support of Public Schools, and What Should be the Influence of Public Schools in the Formation of Character?" was taken up. The Lecturer read the article on the subject by the National Grange Lecturer, in the National Grange Quarterly Bulletin, fourth quarter 1900, and after a discussion participated in by every member present, the following resolution was passed:

Resolved, After deliberate consideration of the subject by Tulare Grange we hold the character of students in the public schools is, to a great degree, formed therein. We believe the frequent visitations by Patrons of Husbandry will have a healthy influence on teachers and pupils, and will thus tend to improve the character of the school and the students.

The December topic for consideration is, "The Influence of the Grange in Promoting Purity and Happiness in Farmers' Homes, and the Effect of Such Home Life in the Formation of Character."

The next meeting of the Grange will be on the third Saturday in December. Tulare. J. T.

### The Yield of Dry Wines.

Quality rather than quantity is the distinctive mark of the California wine vintage of 1900. The production will be about the same as that of last season, but the high standard of 1893 will be attained.

The best authorities agree in placing the amount of wine fermented at from 13,500,000 to 15,000,000 gallons of dry and 7,000,000 gallons of the sweet varieties. The grape growers both in the dry and the sweet wine districts had a profitable year.

The yield of dry wines in the various counties for the vintage just closed is very near the following figures:

Sonoma, 8,500,000 to 9,000,000 gallons; Santa Clara, 2,500,000 to 3,000,000

gallons; Napa, 1,500,000 gallons; Contra Costa, 300,000 gallons; Alameda, from 1,000,000 to 1,500,000.

### Almonds Spoiled in Curing.

A wholesale confectioner of New York City, who has lately returned from a trip through the almond growing districts of California, says that he learned with surprise that almond growers have for years been depriving the almonds of their finest flavor in order to give them the color demanded by the Eastern trade. He tried the almond in its natural state, just as it comes from the tree, and wondered at the superior flavor which it had over the almond prepared for market. He will no longer insist on color perfection, and believes he can educate his customers into eating the natural nut.

### DON'T GUESS AT RESULTS



This man knows what he did and how he did it. Such endorsements as the following are a sufficient proof of its merits.

Oshawa, Minn., Feb. 22, 1898.  
Dear Sir:—Please send me one of your Treatise on the Horse, your new book as advertised on your bottles, English print. I have cured two Spavins and one Turb with two bottles of your Kendall's Spavin Cure in four weeks.

Price, \$1; six for \$5. As a liniment for family use it has no equal. Ask your druggist for KENDALL'S SPAVIN CURE, also "A Treatise on the Horse," the book free, or address,  
DR. B. J. KENDALL CO., ENOSBURG FALLS, VT.

## GLENN RANCH, Glenn County, :::: California.

### FOR SALE In Subdivisions.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for county and State taxation purposes.

This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

### F. C. LUSK,

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.

## The Fresno Scraper.

3 1/4-4-5 Foot.



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JUNE BUDS OFF THE FOLLOWING VARIETIES, ONE FOOT UPWARD:

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ONE YEAR OLD, THREE TO FOUR FEET: Sellers Cling, McDevitt Cling, Nicholls Orange Cling, Tuscan, Levy, Early Triumph.

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**Garden and Field.**

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JULIUS HINES &amp; SON, Baltimore, Md. Dept. 43

**Stock of Hay.**

The Hay Exchange of San Francisco has just issued its annual statement of the stock of hay in the State November 1st. The report shows a supply of 99,600 tons, against 157,375 tons on November 1, 1899, 103,660 tons in 1898, 80,115 tons in 1897, 124,150 tons in 1896 and 106,650 tons in 1895. It is interesting not only in showing where the hay is, but which are the leading hay regions in all cases except the first entry. The statement in detail is as follows:

| Tons.                          |                          | Tons. |
|--------------------------------|--------------------------|-------|
| San Francisco 4,500            | Danville 2,650           |       |
| Belmont 250                    | San Ramon 3,000          |       |
| Redwood 1,000                  | McAvoy 1,000             |       |
| Menlo Park 100                 | Cornwall 200             |       |
| Mayfield 1,200                 | Antioch 500              |       |
| Mountain View 4,000            | Byron 300                |       |
| San Jose 1,500                 | Bethany 1,300            |       |
| Morgan Hill 500                | Stockton 6,000           |       |
| San Martin 500                 | Vallejo 300              |       |
| Hollister 8,500                | Benicia 300              |       |
| Tres Pinos 4,000               | Suisun 1,500             |       |
| Salinas, Gonzales, Chualar 500 | Rio Vista 1,000          |       |
| Mount Eden 200                 | Woodland 700             |       |
| Haywards 150                   | Chico 2,500              |       |
| Decoto 650                     | Honcut 200               |       |
| Irvington 250                  | Reclamation 2,000        |       |
| Warm Springs 1,700             | Lakeville 1,800          |       |
| Milpitas 1,000                 | Petaluma 4,000           |       |
| Alviso 1,500                   | El Verano 150            |       |
| Sunol 200                      | Vapa valley 1,500        |       |
| Pleasanton 12,000              | Sonoma 200               |       |
| Livermore 13,000               | Walnut Grove 1,000       |       |
| Altamont 2,000                 | Courtland, etc 1,000     |       |
| San Pablo 400                  | Kings Land 200           |       |
| Pinole 1,500                   | Ing 200                  |       |
| Martinez 500                   | San Joaquin valley 1,000 |       |
| Pacheco 200                    |                          |       |
| Concord and Bay Point 3,000    | Total 99,600             |       |
| Walnut Creek 300               |                          |       |

**CORRESPONDENCE.****Fresno Notes.**

TO THE EDITOR:—The good rains of the 17th and 18th inst. were just what the hustling farmers of Fresno county desired and were prepared for. Orchard and vineyard work for the season are just about finished up and even the third crop of Muscat grapes secured for the winery.

The grain growers who, mostly, had a good crop this year had everything in readiness to go right ahead after the rains came. In fact a few had already started putting in the crop while yet the ground was dry as ashes.

The fruit growers generally had a very good crop this year, though in some sections it was not so heavy as the year before. The season for curing the fruit was not so warm as usual, but on the whole was very good. Apricots were a rather better crop than usual and also almonds. Pears yielded heavily while peaches were somewhat uneven in yield.

Prices obtained by the grower were generally satisfactory, ranging from 4¢ for peaches to those who contracted their crop early in the season, to 6¢ to those who held theirs until they were ready to be hauled off. Quite the reverse of this is true of pears. Apricots were mostly sold by the growers for about 7 cents.

More fruit was canned at Fresno than in any previous year and canning peaches brought \$16 to \$20 per ton while pears brought only \$12 for good ones.

There are two large canneries in Fresno at present and rumor has it there will soon be more built.

Shipments of fresh fruit began in July with pears. A considerable lot of peaches were shipped to southern Cali-

fornia and many carloads of table grapes have been sent East. Some oranges and few lemons are also now being shipped.

The raisin and fruit packing industry of Fresno may be the subject of some future notes.

The premium list is out, announcing the fourth annual poultry show of the Fresno Poultry, Pigeon and Belgian Hare Association to be held at Fresno, Cal., Dec. 18 to 21, 1900. A perusal of its pages shows a large, liberal and varied list of premiums offered, and there is really no reason why there should not be a good exhibit. A large attendance seems an assured fact because of the increased interest in poultry matters in Fresno and vicinity this last year.

K. H.

**THE VETERINARIAN.**

Answers by Dr. Creely.

**FOR A COLT.**

TO THE EDITOR:—A colt fell in a ditch and got badly chilled; breathed hard. Put in warm bed and breathing became right; but now there is free dropping of pus from the nostrils. What shall I do?—G. L. CRUM.

To the colt give the following powders: Acetamide, 2 oz.; chlorate potash, 4 oz.; citrate iron, 1 oz. Mix and make twelve powders; give two daily, dose for adult.

**TO CORRECT BOWELS.**

TO THE EDITOR:—I have a mare eighteen years old that is troubled with some sort of a diarrhea. Her droppings are fairly solid, but she is very flatulent and at the same time discharges a fluid that keeps her tail in a beastly condition. She is in good condition otherwise.—SUBSCRIBER, Alma.

Give one-half teaspoon of iron sulphate daily in the morning feed; avoid alfalfa hay.

**FOR WARTS.**

TO THE EDITOR:—Can Dr. Creely inform me through the PACIFIC RURAL PRESS what to do for warts on my horse's nose. They only made their appearance about two months ago.—ROSEDALE, Kern county.

Snip off with scissors and touch with lunar caustic to stop further granulation.

I have been away to Utah buying black artillery horses, hence am late with replies.

E. J. CREELY, D. V. S.  
510 Golden Gate avenue, S. F.**BLACK LEG  
...VACCINE.**

During the past two years our vaccines have been used on several thousand head of cattle in the worst infested districts of California and with the best of results, giving entire satisfaction and proving an exceedingly profitable investment to the stock owner.

Every lot is tested and found reliable before a single dose is put on the market.

Write for literature and testimonials.

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**LARGE ENGLISH  
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FOR SALE, Some Extra Pigs of Either Sex.

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Also a few choice young sows bred for winter and spring litters.

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**Cure Him**

Don't give your horse away merely because he is lame, has curb, contracted cord, thrush, etc.

Treat the trouble with

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**TUTTLE'S FAMILY ELIXIR** cures rheumatism, sprains, bruises, etc. Kills pain instantly. Our 100-page book "Veterinary Experience" FREE.

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Beware of so-called Elixirs—none genuine but Tuttle's. Avoid all blisters; they offer only temporary relief if any.

**LUMP JAW**

Easily and thoroughly cured. New, common-sense method, not expensive. No cure, no pay. FREE. A practical illustrated treatise on the absolute cure of Lump Jaw, free to readers of this paper.

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anybody can run it, because it runs itself. Send for our free catalog and see for yourself how very successful it has been on the farm. It also describes our Common Sense Folding Brooder. We pay the freight.

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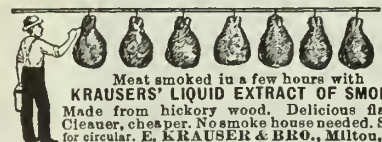
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**FOR SALE.****5 PURE BRED Percherons**

(ONE HORSE AND FOUR MARES)

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Meat smoked in a few hours with

**KRAUSERS' LIQUID EXTRACT OF SMOKE.**

Made from hickory wood. Delicious flavor. Cleaner, cheaper. No smoke house needed. Send for circular. **E. KRAUSER & BRO.,** Milton, Pa.

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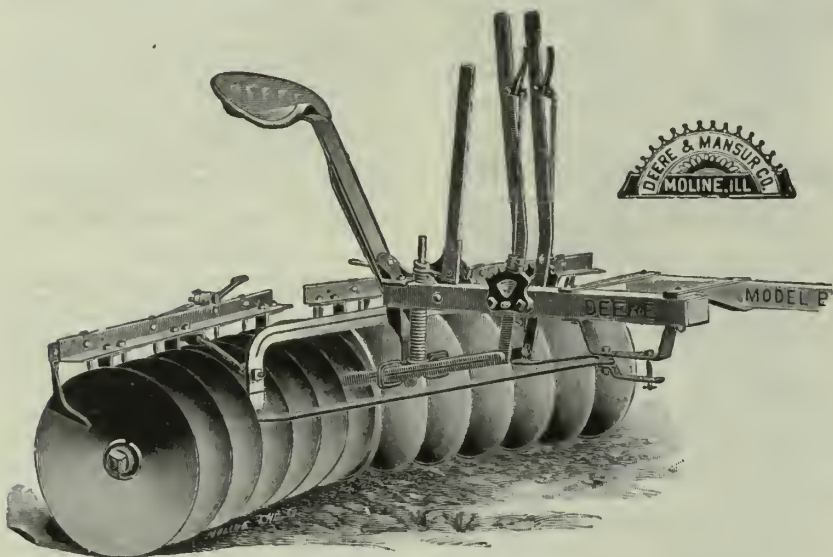
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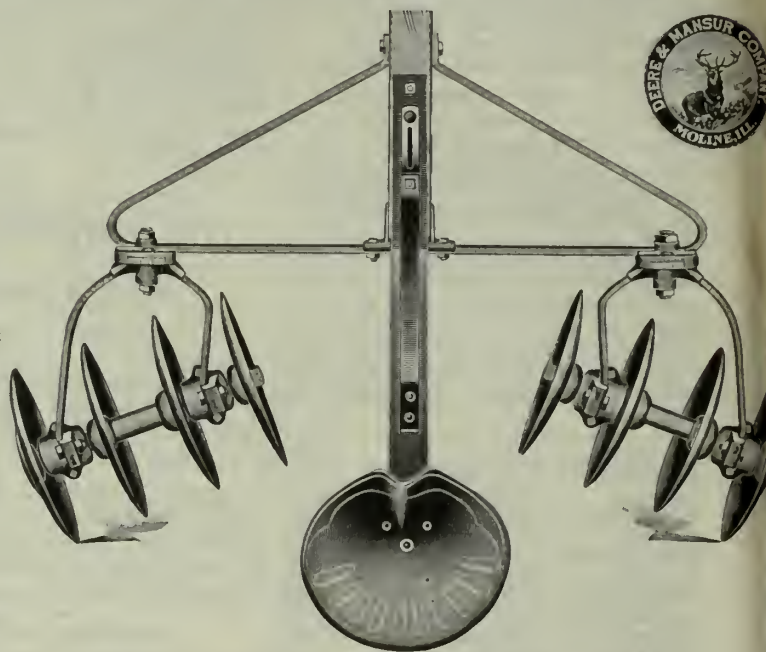
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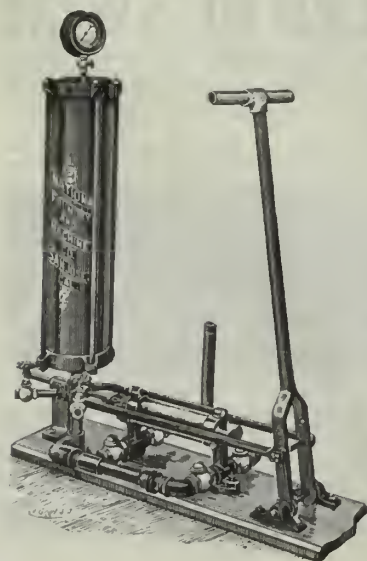
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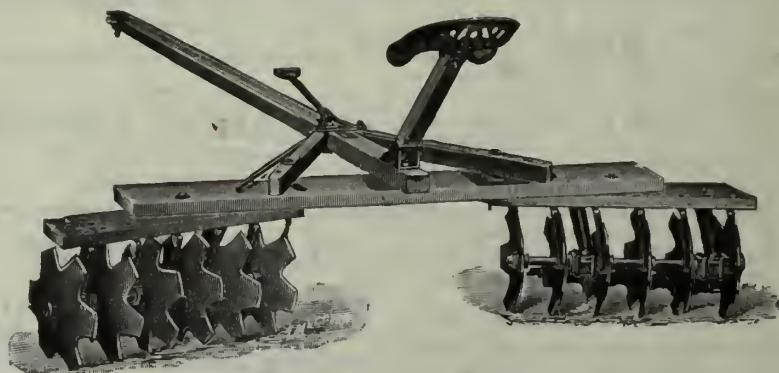
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 22.

SAN FRANCISCO, SATURDAY, DECEMBER 1, 1900.

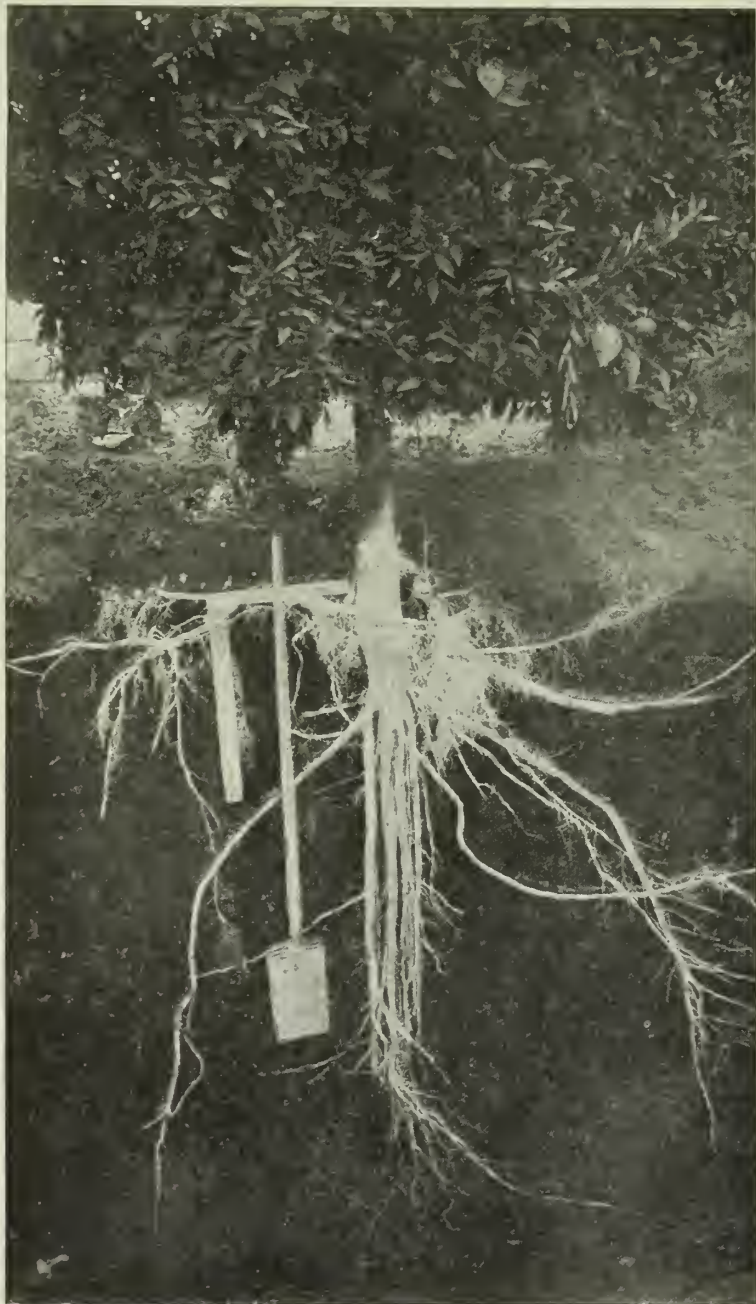
THIRTIETH YEAR.  
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### Deep Rooting of California Fruit Trees.

We are able to make a very striking showing in this issue of the characteristic deep rooting of California fruit trees when they are given such soil as fruit trees should have and such treatment as induces the tree to avail itself of its splendid heritage. The exposition of this matter is incidental to a most valuable line of research pursued by Dr. E. W. Hilgard, Director of the University of California Experiment Station, with the able assistance of Dr. R. H. Loughridge of the station staff. On another page we have a general statement by Dr. Hilgard of the results, so far as they specially relate to the rooting habit of our fruit trees. The main line of investigation was to determine moisture conservation at different depths in different soils with different methods of cultivation, and on this subject a new report, which is now ready for applicants, gives a wide range of striking facts and pertinent deductions.

We conceive the main facts disclosed by this investigation to be of such striking value to our fruit growers and so calculated to strengthen the position of California in the horticultural appreciation of the world, that we desire to give them the widest possible publicity. The contrast between the deep rooting of the fruit trees on deep, free soils in California and the rooting in the shallower soils in the East is very striking. The resemblance also of the Eastern tree rooting to the behavior of a fruit tree over hardpan in California is very great. The first conclusion is obviously that the Eastern fruit tree needs the summer showers to keep its shallow bed moist, and that similarly frequent application of moisture during the growing season is essential to the thrift of a California fruit tree if it happens to be planted over an impervious hardpan not far below the surface. Dr. Hilgard, in the statement on another page, very effectively shows the relation of these facts and their bearing both upon the choice of fruit lands and the treatment of trees, to enable them to do their best on soils which are best for them. For it is quite clear now that defective methods in some parts of the State are really denying to the trees the advantages which nature has for them and reducing them to extremities which could hardly be greater if they were growing over the raw subsoil of the East or over the impervious hardpan which is found here and there in all parts of California.

What fruit trees really do to possess themselves of the stores of moisture and plant food which are available in our best soils when well handled, can be appreciated at once if the pictures are carefully examined. Take, for instance, the rooting of the orange tree at the University substation at Pomona, in Los Angeles county, which is shown on this page. What could be more eloquent of the resources of such a tree than the sight of its roots striking directly downward! Evidently such a tree lays hold upon moisture and fertility in great volume and makes proportional growth and production. There is a sharp lesson here also for the tap-root enthusiast who would put himself to unnecessary trouble and expense to put his tree seed in place and grow his seedling in the orchard rather than in nursery row. This orange tree shows that the tree is not changed in its aims and ambitions if the tree digger severs its tap root. It is rather strengthened in its purpose to possess the best of the earth, for it sends four tap roots downward instead of one. According to our observation this is the course taken by all naturally deep-rooting trees when the soil is deep and moist below and the tap-root philosopher has his labor for his pains—the tree will take care of its own interests after trans-



Deep Rooting of Orange Tree at University Substation at Pomona.



Deep Rooting of Almond Tree at Davisville, Yolo County.

planting, if conditions are right for its growth.

Another lesson is given in deep rooting by the sight of the almond tree growing in the deep loam of the Sacramento valley, near Davisville. Here the tree is occupying about five feet of depth and is sending its roots in all directions through this layer. But the almond roots more deeply when the soil is free and moist. We have seen almond roots growing just as shown in the case of the orange, and this is one reason why the almond shows such thrift and drouth resistance in light soils where some other trees suffer.

To have several farms under the one in sight and not to be obliged to turn them up for aeration, but to use them just where they are, is one of the particular endowments of the California farmer who owns good, deep land. To have this depth of easily penetrable soil to hold moisture for him, so that half a year of drouth shall not turn a leaf on a deep-rooting plant, is another endowment peculiar to the arid region. These things have been known in a general way for years. It is important to know them accurately, as they are disclosed by the recent investigations by the University experts.



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E. J. WICKSON.....Horticultural Editor.

San Francisco, December 1, 1900.

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## The Week.

Things are in fine shape for Thanksgiving, and Californians propose to enjoy it to the full. There has not been a time for years when there seemed so many things to be thankful for, and if any one forgets to give thanks he will excuse himself on the ground of being too busy. The good soaking which has reached the whole State has started up every piece of land-turning machinery in the State, and men are chasing their teams around at the highest rate of speed to get in just as much crop as their circumstances will admit. Trade will be active in all implement and supply lines, and those who make themselves best known will profit by it. So, no matter how busy you may be in the line of production or trade, it will be just as well to open the winter campaign with a good, honest, heart-opening kind of a Thanksgiving, and with joyful adoration for the Giver of all good, and loyal sympathy and well wishing for fellow man, let each one arm himself for the future by earnest thanksgiving for the present and its manifold blessings. The PACIFIC RURAL PRESS will reach most readers one day earlier this week as a token that the staff is practicing what it preaches and is celebrating the Thanksgiving holiday.

Spot wheat is unchanged and the market rather slow, while wheat futures are lower, owing to improved crop prospects. Only one wheat cargo has cleared for Europe and a small jag of wheat for South America, though there went nearly 14,000 barrels of flour in the same direction by this week's steamer. Barley prices are unchanged, but the market is weak. Oats are quiet, except choice lots for seed, and these are in request. We shall probably have a large acreage in oats this year. Millfeeds are unchanged and the tone is easy. Hay is fairly steady, but both the offering and the demand are light. Beef is higher and firm, while mutton is higher. Hogs are steady. Butter is higher and firm for the best grades. Lighter receipts and the Thanksgiving trade are credited with the advance. Cheese is in good shape at old figures with the tone and outlook good. Eggs are again higher, both for the home product and Eastern. Poultry is doing well as a rule. Young chickens and turkeys are higher. Some Eastern dressed turkeys have arrived and sold well. Potatoes are stronger, but no advance, while onions are scarce and high for good stock. Many cut and sprouted onions are offering, however, and they are low. Beans are firm all through the list, while white and pea beans are leading. The apple supply is better, on the average, and a better average price comes with the improvement in quality and trade is more active. There are a good many oranges offer-

ing, but too many of them still green; fine ripe Navels are selling well. Lemons are unchanged. Dried fruits are dragging and critics do not offer much encouragement until the turn of the year. Santa Clara prunes are said to be within control, but there are some outside lots still going at cut rates. Jobbers seem to have enough raisins to last till after the holidays, and are not buying at present. Wool is quiet and little business doing, but values are sustained. Hops are firmly held and few offering from first hands.

We are much interested in the announcement of the organization of a Dairy Exchange in this city. It is to be an organization of dealers, and though there might seem to be on the face of it some presumption that it might be inimical to producers' interests, it is not at all necessary to look at it that way. We have had experience with dairy exchanges for nearly thirty years, and have found them in the main productive of good for the whole dairy industry. They have promoted trade, they have improved products, they have usually stood in the lead of movements for the protection of honest goods and in the warfare against sophistication and fraud in dairy lines. We expect the one now proceeding toward organization in San Francisco and which is said to have begun with some twenty-five members, including representatives of nearly every leading commission house in San Francisco, will work along the same lines that the dairy exchanges in the great Eastern cities have worked. Certainly the lines which they work out for themselves in a preliminary way are promising, viz: to procure first accurate information regarding the daily receipts of butter, eggs and cheese; to hold meetings daily, where market conditions and stocks can be considered and proper values decided upon; with the increasing production of butter in California, to seek Eastern markets for our surplus, and, through the association, employ brokers and agents in the East to give desired information and perhaps place goods in their hands for disposition; to formulate some plan whereby the products of the State's creameries and dairies may be improved in quality, by the employment of practical creamerymen, to be sent without expense to the creameries, and to demonstrate to them wherein they are making mistakes in their manufacture. These are a few of the objects cited. There is certainly much to be done in all these directions, and if the dealers can excite each other to remove some of the provincial prejudices and mannerisms which still prevail in the dairy trade of San Francisco, they will accomplish much good. We shall watch with interest for their progress.

Speaking of dairy progress, readers of the PACIFIC RURAL PRESS must have concluded ere this that the recent Dairy Convention at Sacramento was a very useful meeting. Its proceedings have occupied page after page of our journal, and we can frankly acknowledge them to be the best collection of dairy essays ever prepared for a convention in California. This is all the work of the California Dairy Association, which is worthy of a far wider membership among those in the dairy interest than it now enjoys. It is, however, a very wideawake and active organization, and is accomplishing much for the promotion of the industry. If the producers would rally around this society and fill its membership ranks, it could join with the Dairy Exchange in all matters of wide interest, and there would be very few things in the way of desirable legislation or other progressive movements which could not be readily secured. The matter is worth the attention of all dairy producers.

The San Joaquin Valley Citrus Fair at Tulare, which we have strongly favored in recent issues, is in progress this week and preliminary reports show that it is justifying what has been anticipated for it. The display is said to be fine and widely representative in its character and the attendance exceedingly large. We hope it will keep right on along that line. It is an illustration of the advantage of having a good thing and of making it widely known and doing some good, hard work for it. We hope the lesson will not be lost upon the valley at large.

The prospects for the Nicaragua Canal are now brighter than ever, and it is anticipated that some-

thing quite decisive will come to public knowledge very soon. It is interesting to note that Pacific coast producers propose to get to Europe without knocking around the South Pole and will use some canal, even if they have to go around the globe to find it. The Portland Oregonian says that something strictly new in the wheat exporting business came to light in the charter of the British steamship Glenturret to load on Puget Sound for Europe by way of the Orient and the Suez canal. The shipment which goes out on the Glenturret will be the first that has ever gone to Europe by way of the Orient. The Glenturret, which is the first of a regular line that will ply between the Pacific coast ports, will load on her first outward trip about 3000 tons of wheat and will fill up the remainder of her 6000 tons space with freight for the Orient. She will touch at Yokohama, Kobe, Hongkong, Manila, Singapore and Colombo. There is always a large local traffic between these ports and the steamers will discharge and load at each of them. Freight offerings from Europe to the Orient are always heavy and there will be no difficulty in obtaining full outward cargoes for the steamers coming this way. They expect to obtain enough through freight from Europe to the Pacific coast to enable the steamer to fill up her capacity when she leaves the Orient to cross the Pacific. This gives us direct communication by steam between Europe by way of the Mediterranean, Suez, etc., and other lines to the Orient at the same time. We wonder how the effete cities on the Atlantic coast will like this around-the-world traffic without their getting even a sight of the steamers. It may nerve them to push the Nicaraguan project, for if that does not come soon the world's traffic will go by the new steamships via Suez and the Siberian railway, and the Atlantic coast can be cut up into bathing beaches. Surely the world moves, and moves westward.

The National Irrigation Congress held in Chicago last week, under the presidency of Prof. Elwood Mead of Wyoming, was a great success. There was a large attendance from all parts of the country, and speakers from all parts declared with substantial unanimity for the development of the arid region along broad lines as a work of national character and importance. Some of the addresses will occupy our attention in later issues. So strong is the interest that next year two Congresses will be held—the first at Colorado Springs, Colo., either just before or after the Transmississippi Congress, and the second at Buffalo in October during the Pan-American Exposition in that city. The committee on resolutions brought in a report commending the action of various Government departments in aiding the cause of irrigation, and urging that the work of building reservoirs to store flood waters should be done directly by the Government. Attention was called to the fact that both the great political parties in their platforms in the last campaign declared in favor of the reclamation of "arid America." In this connection, it should not be forgotten that a call has been issued for the annual convention of the California Water and Forestry Association, which will be held in San Francisco December 13, 14 and 15. Before that gathering will be brought recommendations for legislation of wide interest. Within the last few weeks conferences have taken place as to measures that will be submitted to the Legislature at its next session.

We trust that our readers will not forget the twenty-fifth State Convention of Fruit Growers of California, which will be held in Pioneer Hall in this city during the four days beginning December 4th, under the auspices of the State Board of Horticulture. All fruit growers in the State and all organizations of orchardists are earnestly requested to give their presence and co-operation. A number of matters of importance will be considered. There will be a number of interesting papers on various subjects pertaining to the fruit industry.

It may interest our grain growers to know that the average crop of jute in India for the last five years was 5,581,000 bales, but the season has been more favorable this year, and it is estimated that the present crop will amount to fully 6,000,000 bales. This may help bag prices by and by.



## QUERIES AND REPLIES.

### Alfalfa Growing.

TO THE EDITOR:—In your last week's issue you remark that alfalfa is very tender to frost. My experience with it here is that it stands frost well, and by setting it in the autumn you are certain to get a good stand, which you are not sure of in the spring. I set two acres this autumn and it is simply marvelous the way it is growing. We have had a couple of sharp frosts already. My neighbor put in six acres a fortnight before me, and his is equally as good. We put in five acres last year at the same time and had two slashing crops from it. I certainly think that if land freezes deep it will break the tap root when the earth rises, and thus the summer drought finishes it; but for the usual California winter you are safe enough in sowing in the autumn.

About water being close to the surface for alfalfa, a farmer near me has a back water from the water works canal, and he has a strip of about an acre each side of this back water. The water cannot be more than 4 feet at most from the clover, and he appears to me to be cutting the alfalfa all the time from May to October, and keeps his milk cows the rest of the year on it.—W. J. B. MARTIN, Redding.

These facts are interesting and important. We did not say that alfalfa is very tender, but that when the little plant first comes from the seed it is tender. After it gets beyond its baby leaves it is a hardy plant, although it does not like to grow in cold weather. The fall is probably the best possible time to sow alfalfa, if the early rains give moisture enough or the land is moistened with irrigation. This enables the plant to get growth enough to withstand winter frosts. What we objected to was sowing alfalfa say as late as this, when one is apt to encounter hard frosts as soon as the little shoots appear. In that condition they are readily nipped off. And yet, of course, there are many places where it is perfectly safe to sow alfalfa all through the fall and winter. On the whole, there is a great deal more alfalfa sown in the fall now than formerly, and it is generally good practice. As for the freezing and injuring of the tap root, of which our correspondent speaks, it might happen somewhere, but all through the central and eastern parts of the country more is made of alfalfa now than ever before. We do not fear tenderness in the plant after it has made a fair start.

As for alfalfa and standing water, it will unquestionably grow well where there is 4 feet of soil above standing water, but when the water rises to within a foot or so, and often goes all over the surface, alfalfa is generally short lived and unsatisfactory. That is what we meant by water being close to the surface, and yet with a free, open soil we would rather have water at 8 or more feet than 4 for long-lived and strong alfalfa.

### Disinfecting Cuttings.

TO THE EDITOR:—In the last issue of your esteemed paper I find a query under the above heading which I believe could be safely laid to rest. As the phylloxera does not appear above ground in winter, and all pruning is done during the winter months, when the cuttings are made, there is absolutely no danger of transferring it on cuttings, although it may be transferred on rooted vines. But there is great danger of destroying the life of the cuttings, or at least enfeebling and injuring them by disinfection with carbon bisulphide or any disinfectant, and I know of cases where they have been entirely ruined by the process. If a disinfectant is strong enough to kill animal life, it can hardly be harmless to vegetation. My conviction is that your querist had much better risk the cuttings without disinfection than the destruction of the vitality of his cuttings by disinfection. I see no risk in the first, but great danger in the last, which is entirely unnecessary. This question is apt to come up this winter, when I hope there will be many vineyards planted, and deserves careful consideration by all those intending to do so. Let us begin right this time and avoid mistakes which may impair the vitality of our young plantations.—GEO. HUSMANN, Napa.

We are glad to have this strong approval of our claim that the transportation of phylloxera on cuttings is exceedingly slight, owing to the absence of the leaf form and, as Prof. Husmann says, the fact that the insect should be all underground in the winter. Still, even on cuttings, there is just a possibility of the gathering up in the vineyard of dirt enough to convey an insect, though it be infinitesimal. As this is so, people who are naturally anxious to avoid every possible chance, no matter how remote, will resort to disinfection. We believe Prof. Husmann considers the danger of injuring the cuttings greater than it need to be. Of course, if

one uses the carbon bisulphide in excess, and closes up the cuttings in the vapor indefinitely (as careless people are apt to do), there is danger; but, if a small amount is used, and the exposure be not greater than forty minutes, all animal life will be killed without any danger to the cuttings. Even growing plants in full leaf can be safely treated with bisulphide if one is careful only to use a small amount and still all animal life be killed. It is not quite true that what kills an animal must injure a plant. Hydrocyanic acid gas can be used and is constantly used at the south to kill scale insects under their covers, and still plant leaves pass unhurt. The same is true of carbon bisulphide—use it intelligently and it will not injure plants, and dormant cuttings will endure more than active foliage.

### The Silo in California.

TO THE EDITOR:—I have a ranch down in Santa Clara county, near Mountain View. We have on that ranch some twenty-five or thirty acres of sediment land, with some adobe mixed in the soil, on which we could raise very good crops of corn. We have been using the ranch in the direction of running quite a little Jersey dairy, and we find ourselves handicapped for want of green food. Recently while East I investigated the question of "silo," which seemed to be in a good deal of favor in a great many places. I want to ask if it is feasible in this climate to get corn so that we could make ensilage that could be used from, say, the first of July to the first of December? Also, can you tell me whether there are any "glucose" manufactories in this State? Some of the dairymen in New York State are using the hull from corn after it has gone through the glucose factory.—DAIRY OWNER, San Francisco.

Your proposition is a good one. Regular readers of the PACIFIC RURAL PRESS already know that the silo is thoroughly approved in California and that there are probably not less than 300 silos in use, and they are scattered all the way from Siskiyou to San Diego. Nearly all of them are highly esteemed and are proving very valuable in just the way our correspondent indicates—the furnishing of succulent feed when the pasturage is slack. They are used even by those who have to grow the corn on upland in a cool climate, where corn does not make its best growth. On such land as you describe and in so warm a region, you ought to get a splendid growth of corn and splendid results from the silo. Other crops are also available for the silo, as has been fully discussed in our columns. We have no glucose factories in California. We cannot compete in that line with the great corn States of the Mississippi valley, for corn growing for grain is a different proposition from growing green corn for the silo, and we shall probably never have corn cheap enough in this State to warrant glucose making.

### Northern Spy Roots.

TO THE EDITOR:—Do you know anywhere in the State of California I could obtain any Northern Spy scions or any Northern Spy roots for grafting this winter? Will you explain how you treat the Northern Spy root when grafting?—APPLE GROWER, Watsonville.

We do not know where you can get Northern Spy roots for grafting. We have been expecting our nurserymen to make announcements of them, in view of the great interest now manifested in resistant stocks, but we have not yet seen such offerings. Northern Spy scions are also hard to find, because the variety has not proved a good bearer and has been largely grafted over. Grafting on the resistant roots is like other root grafting, simply inserting the graft at the root crown by cleft or tongue graft, according to the size of the root. In planting out, the graft should be brought a little above the surface of the ground.

### Vines for Chicken Shade.

TO THE EDITOR:—What running vine grows most rapidly in this climate—a vine which would, when trained on trellis, provide a shade for chickens?—RANCHER, Lathrop.

We are not sure which vine would do best in your climate. Our own chickens are shaded by two vines: one is the Virginia creeper, the other is commonly called the pink passion vine. It is an exceedingly rapid grower, a single plant having made 125 feet of running branches in one season. It bears a very large showy pink blossom and a large yellow fruit which is edible. The chickens soon learn to pick holes in the fruit and eat the seeds out clean. It is the best vine we know of for rapid growth.

## WEATHER AND CROPS.

### Report of the U. S. Weather Service for Week Ending November 26, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

#### SACRAMENTO VALLEY.

Rain has continued through most of the week, and all farm work has been suspended. The temperature has been slightly below normal, but no injurious frosts have occurred. The rainfall of the past two weeks has been abnormally heavy for the month of November, and removes all fears of another dry season. The accompanying cool weather, with abundant snowfall in the mountain districts, has also been favorable. As soon as the weather permits, farmers will resume plowing and seeding on a more extensive scale, and all are looking forward to a large acreage of grain, with abundant crops. The high winds on the 20th and 21st caused some damage to buildings, fences and trees in some sections. Following are reports of precipitation at a few stations: For the season—Red Bluff 6.59, Sacramento 6.66, Wheatland 6.05. From Nov. 16th to 22nd—Grand Island 1.51, Rosewood 2.02, Thermalito 3.39, Wheatland 3.67.

#### COAST AND BAY SECTIONS.

The storm at the close of last week continued with but little interruption to the 22nd, and was accompanied by nearly normal temperature. The precipitation has been unusually heavy in all sections, and practically insures good crops. The soil is thoroughly saturated; plowing and seeding will soon be in progress, with every indication of a large acreage of grain. In the Santa Clara valley many orchards were flooded, with no damage from washing of soil, but with some benefit from the deposit of silt. The high wind on the 21st caused some damage to buildings and fences, and injured trees to some extent, but no serious damage has been reported. The apple crop in Humboldt county is reported the largest for several seasons. Precipitation reports: For the season—Eureka 14.35, San Luis Obispo 8.66, San Francisco 5.85, Arroyo Grande 8.02, Paso Robles 7.54, King City 7.85 (last season 2.88). For the storm—Peachland 5.03, Santa Rosa 4.87, Nipomo 4.56, Menlo Park 4.35, Gilroy 9.39.

#### SAN JOAQUIN VALLEY.

The continuance of the storm of last week up to the 22nd has proved very beneficial to all farming interests. The precipitation has been the heaviest for the period for several years and has been followed by cooler weather, with cloudiness or fogs, but no injurious frosts. Early sown wheat and pasturage continue in good condition. Farmers are preparing to resume plowing and seeding on a larger scale as soon as the weather permits, and the grain acreage will probably surpass previous records. High winds on the 20th caused some damage to trees and buildings. Precipitation reports: For the season—Fresno 5.10, Independence 2.14, Reedley 5.26. For the storm—Lodi 4.70, Madera 3.61, Merced 3.92, Oleander 4, Tulare 2.86, West Point 8.82, Whittier 8, Elmdale 5.12. For the week—Visalia 3.86, Wasco 1.65.

#### SOUTHERN CALIFORNIA.

The rainfall during the storm has been the heaviest for several years, and has caused considerable damage in some sections. The benefit to agricultural interests will undoubtedly more than compensate for the injury done, as it will enable farmers to immediately commence plowing and seeding, improve pasturage and insure a good water supply. The most serious damage by the storm was to railroad and street car lines, but citrus orchards were also somewhat injured, and there was considerable loss in celery and cabbage fields. Precipitation reports: For the season—Los Angeles 6.79, San Bernardino 7.01, San Diego 1.70, with amounts varying from 3 to 12 inches in the adjacent country. For the storm—Anaheim 3.91, Santa Maria 5.40, Saticoy 4.50.

LOS ANGELES SUMMARY.—The storm during the first of the week gave the best rains for years; the rainfall was general—a steady downpour, heavy at times. Some wash damage, but the offset generally of great good. Feed is growing rapidly. Plowing and seeding in progress.

EUREKA SUMMARY.—Rain has delayed farm work; soil is too wet for plowing. Green feed is abundant and dairy interests are thriving.

#### Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Nov. 27, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week. | Total Seasonal Rainfall to Date. | Total Seasonal Rainfall Last Year to Same Date. | Average Seasonal Rainfall to Date. | Minimum Temperature for the Week. | Maximum Temperature for the Week. |
|----------------------|------------------------------|----------------------------------|-------------------------------------------------|------------------------------------|-----------------------------------|-----------------------------------|
| Eureka.....          | .70                          | 14.59                            | 18.26                                           | 6.90                               | 36                                | 64                                |
| Red Bluff.....       | 2.36                         | 6.59                             | 6.55                                            | 4.11                               | 38                                | 61                                |
| Sacramento.....      | 2.64                         | 6.66                             | 6.98                                            | 2.74                               | 44                                | 66                                |
| San Francisco.....   | 1.55                         | 5.85                             | 7.58                                            | 3.00                               | 48                                | 60                                |
| Fresno.....          | .68                          | 5.10                             | 3.38                                            | 1.32                               | 44                                | 68                                |
| Independence.....    | .94                          | 2.14                             | 1.22                                            | 1.28                               | 32                                | 72                                |
| San Luis Obispo..... | 3.83                         | 8.66                             | 5.84                                            | 2.76                               | 42                                | 80                                |
| Los Angeles.....     | 4.02                         | 6.79                             | 2.50                                            | 2.10                               | 48                                | 60                                |
| San Diego.....       | .68                          | 1.73                             | 1.28                                            | .94                                | 50                                | 80                                |
| Yuma.....            | .60                          | .02                              | .58                                             | 1.16                               | 50                                | 80                                |



## HORTICULTURE.

## Deep Rooting of California Fruit Trees.

Condensed from statement by DR. E. W. HILGARD, in the forthcoming report of the University of California Agricultural Experiment Station.

Doubtless the main cause of the remarkable endurance of drouth is to be found in the much deeper rooting of all plants in arid climates, whereby not only a much larger bulk of moist soil is at their com-

tillage of the ground, and in the use of irrigation water. For, if the latter is used too frequently or too abundantly, the salutary habit of deep rooting will be abandoned by the plant, and it will, as in the East, be dependent on frequent rain or irrigation; and also, owing to the small bulk of soil upon which it can draw for its nourishment, upon frequent and abundant fertilization.

Eastern emigrants, as well as a large proportion of California farmers, do not realize the privilege they possess of having a triple and quadruple acreage of arable soil under their feet, over and above the

in that way, especially when plowed too wet, yet continuous plowing to the same depth year after year will in the end produce the same result in all but the most purely sandy soils. A close watch should be kept upon this point by every one, and the subsoiler or coulter run with or after the turning plow alternate years, or every three or four years, according to the nature of the land. No doubt many farmers in this State will be able to recall examples of apparently unaccountable failures of the crop of one farmer, while a near neighbor did not suffer, and of fields, divided only by a lane or fence, having identical soil and treated alike in all but this respect; in one case, the gang plow year after year to 3 inches depth, in the other the use of a subsoiler, or heavy chisel cultivator, to 5 or 6 inches depth, following the plow annually or biennially.

The bedrock lands of Sacramento county, whose clay subsoil must be dynamited to make orchards grow thriftily, illustrate very well the condition of things brought about by the formation of a plowsole. Roots will do a great deal to help themselves to the needful moisture, if they are given but a chance. The effect of a naturally existing hardpan upon the development of the root system of trees is well shown in the photograph of a tree at the Southern Coast Range substation near Paso Robles, which after several years' struggle for existence finally succumbed during the dry season of 1898. It illustrates tellingly the case of numerous young orchards throughout the State which, having been planted on land underlain by stiff clay or hardpan, languish or succumb after apparently doing well for three or four years.

The "irrigation hardpan," much discussed of late, is simply a plowsole still more compacted by irrigation.

**ROOTS FOLLOW MOISTURE.**—Very striking examples of deep rooting, as the result of vertical moisture penetration, can also be observed in some of our native trees, which, while naturally at home on moist ground, are nevertheless sometimes found forming luxuriant clumps on the slopes and even summits of our coast ranges and foothills. If we examine the ground where this occurs in the case of California laurel, we will generally find that the soil in which they grow is underlain by slate or shale standing on edge, into the crevices of which the roots penetrate, wedging them open, while themselves flattening out, and thus penetrating to moisture at considerable depths. The same may be observed in the case of the erect bedrock or foothill slates of the Sierra, on which native as well as fruit trees flourish in very shallow soils, sometimes reaching permanent moisture at the depth of 10 or more feet below the surface. It can readily be observed during rains that there is comparatively little run-off from the surface of these lands underlain by vertical shales.

On the same principle, the grape vines which bear some of the choicest raisins of Malaga on the arid coastward slopes are made to supply themselves with



Peach Tree on Peach Root at Niles, Alameda County.

mand, but the roots are withdrawn from the injurious effects of the hot, dry surface and air.

This deeper range of roots is not the result of foresight on the part of the plant. It could not occur on Eastern soils, because of the intervention, in the great majority of cases, of difficultly penetrable subsoils; from which, moreover, plants could draw but little nourishment on account of their "rawness." In the arid region, as a rule, subsoils in the Eastern sense do not exist; the soil mass is practically the same for several feet, and in the prevalent soils is very readily penetrable to great depths. This, summarily speaking, is due to the slight formation of clay and the rarity of heavy rains in the arid region. And this easy penetrability of the soil implies, moreover, that, being well aerated, the depths of the soil are not "raw," as in the East, and, therefore, that the subsoil, such as it is, may fearlessly be turned up as deeply as the farmer is willing to go with the plow without danger of injuring the next season's crop, in all lands that are well drained; as, by reason of their depth and perviousness, is the case with most California soils. The accompanying photograph, taken at Niles, Alameda county, illustrates from nature the deep penetration of a peach root developing in a normally deep, well-aerated "bench" soil, in a manner quite impossible to the same root when growing in land underlain, as are most Eastern ones, by a subsoil which is either too dense or too wet to be utilized by the tree. But, beyond this, we have the well authenticated testimony of intelligent fruit growers to the effect that in digging wells in the sandy or silty "low mesa" lands, they have found the unmistakable roots of their cherry and prune trees at depths, respectively, of 21 and 24 feet. It thus ceases to be a wonder that the deciduous fruits of the East can at so many points in California be grown without irrigation through the long summer's drought. The deep-rooting of an orange tree at the southern California substation and of an almond tree in Yolo county are shown on the first page of this issue.

A glance at the figures annexed suffices to show that a root system like the typical Eastern tree root (from a photograph by Prof. King of the University of Wisconsin) will stand in absolute need of frequent rains or irrigation to sustain its vitality, such a one as that of the Niles tree may brave prolonged drought with impunity, be independent of surface conditions, and be able to perform all its functions out of reach of stress from lack of moisture; in fact, the moisture determination under this very tree gave, to the depth of 8 feet, 6.6%, or an aggregate amount of water of 1058 tons per acre. It is equally clear that it is to the farmer's interest to favor to the utmost this deep penetration of the roots, both in the preparation and

area for which their title deeds call; and they tenaciously continue to adhere to precautions and practices which, however salutary and necessary in the region of summer rains, do not apply to this climate.

**SHALLOW PLOWING AND ITS EFFECTS.**—The shallow



Peach Tree on Hardpan, University Substation, Near Paso Robles.

plowing so persistently practiced results in the formation of a "plowsole," that plays the part of the Eastern subsoil in preventing root penetration, limiting their range for moisture and plant food, and thus naturally causing crops to succumb to a slight stress of season which ought to have passed without injury, had the natural conditions been taken into proper consideration.

That the formation of this plowsole is more apt to occur in some lands than others, is a fact familiar to all. It should be specially remembered that while clay loams and clays (adobe) are most quickly injured

moisture, without irrigation, by opening around them large, funnel-shaped pits, which remain open in winter so as to catch the rain, causing it to penetrate downward along the tap root of the vine, in clay shale quite similar to that of the California coast ranges, and, like this latter, almost vertically on edge. Yet on these same slopes scarcely any natural vegetation now finds a foothold.

Similarly the "ryots" of parts of India water their crops by applying to each plant immediately around the stem such scanty measure of the precious fluid as they have taken from wells, often of consid-



erable depth, which form their only source of water supply. Perhaps, in imitation of these, an industrious farmer has practiced a similar system on the high benches of Kern river, and has successfully grown excellent fruit for years on land that originally would grow nothing but cactus. Sub-irrigation from pipes has been applied in a similar manner.

The principle flowing from the above is simply that the most economical mode of using irrigation water is to put it "where it will do the most good," close to the stem of the plant or trunk of the tree, and let it soak downward so as to form a moist path for the roots to follow to the greatest possible depth. It is this deep penetration to natural moisture, as a matter of fact, which enables the small quantities supplied to produce such marked effects. This can be observed strikingly in the case of the "summer weeds" that come up after the crop is laid by. Those coming up early will have time to follow the moisture down and survive all summer, while those coming up even two or three days later will just fall short of being able to keep pace with the drying of the soil, and, after a short struggle, will give up the fight and die out. A very trifling amount of water

apply it immediately around the tree, in a trench dug or plowed for the purpose.\* When, on the contrary, irrigation water is abundant and its temperature low, it will be preferable to practice furrow irrigation, or, possibly, even flooding. As a compromise, the water may be applied in two deep furrows run parallel to the rows at 4 or 5 feet distance. The latter practice has brought about the deep-rooting of orange trees at the southern California substation exemplified in the accompanying plate. (See front page.)

To those who are located in or near the foothills and are apt to receive their irrigation water at a temperature not far above that at which it left the high Sierra, this is a very serious consideration. Many a time there have come to the station accounts of an unaccountable dropping of fruit, or injury to field crops, which, when investigated, were directly traceable to the use of cold irrigation water, at a time when the trees or crops were in full growth. As the same ditch may at different times supply him with warm or cold water, according to the use made of it before it reaches the lower level, the irrigator should use, if not a thermometer, at least his hand and a good slice of common sense, to determine whether or not he is running a risk of injury by applying it directly to his land.

As to the more complete use claimed to be made of the soil in flooding and furrow irrigation, it must be remembered that while this is the case in a horizontal direction, yet, unless irrigation is practiced rather sparingly under the furrow system, it may easily happen that the gain made horizontally is more than offset by a corresponding loss in the vertical penetration of the root system.

This is amply apparent in some of the irrigated orange groves of southern California, where the fine roots of the tree fill the surface soil as do the roots of maize in a corn field of the Mississippi States, so that the plow can hardly be run without turning them up and under. In these same orchards it will be observed in digging down that at a depth of a few feet the soil is too water-soaked to permit of the proper exercise of the root functions, and that the roots existing there are either active or diseased. That in such cases abundant irrigation and abundant fertilization alone can maintain an orchard in bearing condition, is a matter of course; and there can be no question that a great deal of the constant cry for the fertilization of orchards in the irrigated sections is due quite as much to the shallowness of rooting induced by over-irrigation, as to any really necessary exhaustion of the land.

When the roots are induced to come to and remain at the surface, within a surface layer of 18 to 20 inches, it naturally becomes necessary to feed these roots abundantly, both with moisture and with plant food. This has naturally led to an over-estimate of the requirements of the trees in both respects. Had deep rooting

been encouraged at first, instead of over-stimulating the growth by surface fertilization and frequent irrigation, some delay in bearing would have been amply compensated for by less of current outlay for fertilizers, and less liability to injury from frequently unavoidable delay, or from inadequacy, of irrigation.

It is curious to note that in the Sacramento valley, where cultivation antedates considerably that of the regions where, in connection with irrigation, fertilizers are most abundantly used, we hear so little of the need of fertilization; while from southern California we constantly receive inquiries as to the fertilizers to be used on lands that are being just taken into cultivation for the first time; not to speak of lands which, after six or eight years' culture, are annually dosed with large dressings of expensive fertilizers. Is that because the lands of the Sacramento valley are more productive, naturally, than those of the sunny south? Not at all. If anything, the lands of the San Gabriel and Santa Ana valleys exceed the Sacramento soils in native supply of plant food. But while in the latter valley the trees have been allowed to root in accordance with the nature of the climate, without irrigation, orchardists in the south have used all the water they could get from the outset. They have taken their cue from the Eastern conditions of rainfall, and have imitated these as nearly as their

\*This is a wholly different matter from the irrational practice of banking up around the tree, by means of the plow, a square basin in which, when filled with water, the trunk is flooded, and the soil surface compacted so as to result in subsequent rapid evaporation, unless cultivated by hand, as it would usually have to be. The true basin method fills up the ditch with loose earth, which prevents evaporation.

supply will permit. However deep and rich their soils, they have shallowed them by over-irrigation; and now both irrigation and fertilization have become as necessary as are the bi-weekly rains and the annual application of fertilizers in the East.

It must not be inferred from the above statement that the Sacramento valley may expect to do without fertilizers permanently, or even for a long time to come. But it is certain that, in the absence of fertilization, these lands have held out wonderfully, simply because the farmers have there availed themselves, it may be unconsciously, of the privileges implied in the conditions of our arid climate.

## THE DAIRY.

### Sugar Beet Pulp as a Dairy Feed.

By PROF. LEROY ANDERSON, Berkeley, Dairy Instructor at the State University, at the recent convention of the California Dairy Association.

In this State, where so many sugar beets are grown and manufactured into sugar, the question of how to profitably dispose of the refuse pulp is an important one. If it can be used to supply the dairy with a succulent food during a period when the pastures are dry and no other green food available, it may prove itself of considerable value. The crying need of many of California's dairy districts is for some form of succulent food to keep up the flow of milk during the latter portion of the period of drought, and while the young grass is yet too small for pasturage. When all the other feed the cows receive is dry the addition of a substance containing even an abnormal amount of water seems to have a stimulating effect upon the flow of milk far beyond the actual nutritive value of the watery food itself. It is the high water content of beet pulp, causing a great bulkiness, which renders it a burden upon the hands of the sugar manufacturer. However, if the large percentage of water contained in the pulp makes it of value for feed, then a double purpose is served.

**BET PULP EXPERIMENT.**—The advent of the sugar beet and sugar factory into New York introduced one of California's problems into the Empire State. The manufacturer became troubled with the mass of beet pulp accumulating about his buildings and wished for a prophet to arise and suggest a means for its disposal. The Cornell University Agricultural Experiment Station essayed to solve the problem—procured a few carloads of pulp from the Binghamton factory and conducted the experiment herein described. The analysis of the beet pulp as received from the factory showed it to have the following percentage composition: Water 91.68, crude protein .57, crude fiber 1.86, nitrogen-free extract 5.38, ether extract .09, ash .42. Only traces of sugar were found in the nitrogen-free extract.

Two experiments were conducted, one for a period of eleven weeks during the season of 1898-9, and the second for a period of ten weeks during the fall of 1899. The plan of the first experiment was to feed the beet pulp in alternating periods with corn silage, and to feed about the same amount of pulp daily as of silage to the individual cows. Because of the greater amount of dry matter in silage, this resulted in the cows eating much more hay when fed pulp than when fed silage, and with the further result that practically equal amounts of dry matter were consumed whether the cow ate silage or beet pulp.

The quantity of beet pulp consumed daily varied from 40 pounds for the smaller cows to 50 pounds for the larger. The hay fed was clover and timothy mixed. The grain consisted of 8 pounds per head daily of a mixture composed of two parts of gluten feed, two parts of wheat bran and one part of cottonseed meal. Five cows were under experiment at this time and their record for milk production is summarized in the table given below. For this summary the periods of three weeks for showing the comparative effect of silage and beet pulp are taken after the cows had been on each respective feed for at least one full week. The table shows the average weekly yield of milk and fat for each period of three weeks on each food:

| AVERAGE WEEKLY PRODUCT OF MILK AND FAT,<br>FIRST EXPERIMENT, 1898-9. |          |     |              |        |             |              |            |
|----------------------------------------------------------------------|----------|-----|--------------|--------|-------------|--------------|------------|
| Name                                                                 | Breed    | Age | Days in milk | Food   | Pounds milk | Per cent fat | Pounds fat |
| Ada                                                                  | Holstein | 2   | 57           | Silage | 131.2       | 3.86         | 5.05       |
|                                                                      |          |     |              | Pulp   | 132.1       | 3.32         | 4.38       |
| Cherry                                                               | Jersey   | 5   | Fresh        | Silage | 182.3       | 5.70         | 10.40      |
|                                                                      |          |     |              | Pulp   | 186.8       | 5.75         | 10.75      |
| Kate                                                                 | Holstein | 2   | 81           | Silage | 129.4       | 3.57         | 4.62       |
|                                                                      |          |     |              | Pulp   | 129.1       | 3.23         | 4.17       |
| Ruby                                                                 | Holstein | 10  | 194          | Silage | 239.0       | 3.22         | 7.69       |
|                                                                      |          |     |              | Pulp   | 219.9       | 3.17         | 6.95       |
| Mollie                                                               | Holstein | 9   | 88           | Silage | 235.5       | 3.45         | 8.12       |
|                                                                      |          |     |              | Pulp   | 224.5       | 3.19         | 7.15       |
| Average of all                                                       |          |     |              | Silage | 183.5       | 3.91         | 7.18       |
|                                                                      |          |     |              | Pulp   | 178.5       | 3.74         | 6.68       |

SECOND EXPERIMENT.—The plan of this experiment



Rooting of Fruit Tree in Wisconsin.

put in the right place would enable these weeds to reach down and maintain themselves through the season on the natural supply.

**BASIN IRRIGATION.**—It will be noticed that this principle is practically the same as that of the basin irrigation of orchards, which was originally largely practiced in California, but has now been mostly abandoned for furrow irrigation. The latter has been almost universally adopted, partly because it requires a great deal less hand labor, partly under the impression that the whole of the soil of the orchard is thus most thoroughly utilized; partly, also, because of the injurious effect produced upon trees at times by basin irrigation.

The explanation of such injurious effects is, essentially, that cold irrigation water depresses too much the temperature of the earth immediately around the roots and thus hinders active vegetation to an injurious extent, sometimes so as to bring about the dropping of the fruit. This, of course, is a very serious objection, to obviate which it might be necessary to reservoir the water so as to allow it to warm before being applied to the trees. In furrow irrigation the amount of soil soaked with the water is so great that the latter is soon effectually warmed up, besides not coming in contact too intimately with the main roots of the tree, along which the water soaks very readily when applied to the trunk, thus affecting their temperature more directly. It is for the fruit grower to determine which consideration should prevail in a given case. If the water supply be scant and warm, the most effectual use that can be made of it is to



differed from that of the first in that the attempt was to feed the cows all the beet pulp they could readily consume, and not give them any more hay than when they were on silage. The feeding of beet pulp began on October 14th, when a portion of the silage was replaced by 20 pounds of pulp for each cow. This amount was gradually increased and the silage decreased until the latter was entirely replaced by beet pulp. The amount of pulp given varied according to the size and appetite of the animal. Each one received 30 pounds at the morning feed, besides what hay was allowed for the day. At night the quantity varied from 45 to 65 pounds, and no other feed was given at this time except 5 pounds of grain, the remaining 4 pounds of the daily grain ration being given in the morning. This grain ration was composed of a mixture of two parts of gluten feed, two parts of sugar corn feed and one part of wheat bran.

During this experiment the beet pulp was fed continuously to all the cows for a period of six weeks, when all were changed to corn silage. In order to compare the two feeds, I have taken from the records the last two weeks on beet pulp and a similar period after the cows had become accustomed to silage, and averaged the yield of milk and fat for these periods separately. This average appears in the table below:

AVERAGE WEEKLY PRODUCT OF MILK AND FAT,  
SECOND EXPERIMENT, 1899.

| Name                     | Breed           | Age | Days in milk | Food   | Pounds milk | Per cent fat | Pounds fat |
|--------------------------|-----------------|-----|--------------|--------|-------------|--------------|------------|
| Ada                      | Holstein        | 2   | 12           | Silage | 182.2       | 3.70         | 7.75       |
|                          |                 |     |              | Pulp   | 191.0       | 3.74         | 6.15       |
| Belle                    | Jersey-Holstein | 4   | 46           | Silage | 195.2       | 4.08         | 7.98       |
|                          |                 |     |              | Pulp   | 215.9       | 3.94         | 8.51       |
| Bertha 2nd               | Jersey          | 5   | 148          | Silage | 153.0       | 4.78         | 7.32       |
|                          |                 |     |              | Pulp   | 171.4       | 4.48         | 7.68       |
| Garnet                   | Jersey          | 4   | 46           | Silage | 166.3       | 4.61         | 7.67       |
|                          |                 |     |              | Pulp   | 180.5       | 4.29         | 7.74       |
| Glista                   | Holstein        | 7   | 35           | Silage | 270.0       | 3.37         | 9.11       |
|                          |                 |     |              | Pulp   | 279.4       | 3.44         | 9.60       |
| Ruby                     | Holstein        | 11  | 161          | Silage | 160.2       | 3.16         | 5.06       |
|                          |                 |     |              | Pulp   | 185.9       | 3.27         | 6.08       |
| Average of all           |                 |     |              | Silage | 187.8       | 3.89         | 7.31       |
|                          |                 |     |              | Pulp   | 204.0       | 3.82         | 7.80       |
| Average both experiments |                 |     |              | Silage | 185.4       | 3.90         | 7.24       |
|                          |                 |     |              | Pulp   | 189.8       | 3.78         | 7.17       |

The second experiment was a more satisfactory test of the value of sugar beet pulp for producing milk than the first one. In the first experiment one of the cows—Mollie—could with difficulty be induced to eat the pulp, and, as she was restricted in other foods, she fell off in milk yield. Then, too, during the latter part of the experiment the pulp became badly frozen and was not eaten with the usual relish by any of the cows. During the second experiment, however, all the cows were in good spirits; they ate all the beet pulp readily, and the pulp was always in a good condition for feeding.

On the whole, there was a general increase in the flow of milk when beet pulp was fed. In regard to the per cent of fat, some cows were slightly lower when fed pulp than when fed silage, while the yield of total butter fat was very nearly the same in both cases. During the second experiment, when the conditions were more favorable than in the first, there was the largest increase in milk and fat and practically no decrease in per cent of fat when beet pulp formed so large a part of the ration.

**FEED AND MILK.**—The amount of dry matter required to produce equal amounts of milk and fat vary slightly between the beet pulp and corn silage rations. The following table shows the average number of pounds of dry matter required to produce 100 pounds of milk and 1 pound of fat:

| No. cows   | No. weeks in av. | —MILK— |         | —FAT— |         |
|------------|------------------|--------|---------|-------|---------|
| Year.      |                  | Pulp.  | Silage. | Pulp. | Silage. |
| 1898-9...  | 5                | 82.7   | 89.7    | 23.7  | 23.9    |
| 1899 ...   | 6                | 78.9   | 87.2    | 20.8  | 22.8    |
| Av. of all |                  | 81.1   | 88.6    | 22.4  | 23.5    |

**SILAGE AND PULP.**—The fact has already been noted that, during the first experiment when the amount of beet pulp fed to each cow was about equal in weight to the quantity of silage which she would normally eat she consumed more hay than when fed silage. The records of the second experiment show that, when the cows were restricted as to quantity of hay and given all the beet pulp they desired, each one consumed daily more than twice the amount of pulp that she would normally require of silage. If, then, the amounts of dry matter required to produce milk and fat do not differ materially, whether the cows receive silage or beet pulp, what is the relative feeding value of pulp as compared to silage? This may be determined by the number of pounds of silage and beet pulp which were respectively required for equal amounts of milk and fat. The ratio of the one to the other will determine how much more one may be worth than the other to feed dairy cows. In finding this ratio the amounts of hay and grain need not be considered so long as equal quantities were con-

sumed, whether silage or beet pulp were fed, as was the case in the second experiment with all the cows except Bertha 2nd. In the first experiment the same quantities of grain were fed throughout, but since varying amounts of hay were fed this must be considered, and has been so taken into account in making up the figures tabulated below. The ratios given were calculated from the individual records for the same periods as were used in determining the average amounts of dry matter required to produce milk and fat:

RATIOS OF THE QUANTITY OF SILAGE TO THE QUANTITY OF BEET PULP REQUIRED TO PRODUCE EQUAL AMOUNTS OF MILK AND FAT.

| —1898-9—                 |        |        | —1899—        |        |        |
|--------------------------|--------|--------|---------------|--------|--------|
|                          | Milk.  | Fat.   |               | Milk.  | Fat.   |
| Ada.....                 | 1:2.60 | 1:3.00 | Ada.....      | 1:2.46 | 1:2.42 |
| Cherry.....              | 1:2.16 | 1:2.14 | Belle.....    | 1:2.20 | 1:2.28 |
| Kate.....                | 1:2.64 | 1:2.90 | Bertha 2nd..  | 1:2.70 | 1:2.90 |
| Mollie.....              | 1:0.66 | 1:0.71 | Garnet St.    |        |        |
| Ruby.....                | 1:1.21 | 1:1.23 | Lambert...    | 1:2.08 | 1:2.47 |
|                          |        |        | Glista 4th... | 1:2.16 | 1:2.14 |
|                          |        |        | Ruby.....     | 1:1.93 | 1:1.87 |
| Average... 1:1.85 1:2.00 |        |        | 1:2.26 1:2.35 |        |        |

The average of all was 1:2.07—1:2.18. These figures mean that, according to the records, corn silage is worth two-thirds to three times as much as beet pulp for producing milk and butter fat, when individual cows are considered, and twice as much when the average product is considered.

The low ratio given by Mollie is explained by the fact that she ate a comparatively small quantity of beet pulp.

**CALIFORNIA BEET PULP.**—The analysis of sugar beet pulp as made by Prof. Jaffa of the University of California shows it to have less water and a higher protein content than the beet pulp used in these experiments. In any case it contains about 90% of water and protein, carbohydrates and fat as to make it a nearly balanced ration itself. It would not be well, however, to restrict cows to a beet pulp diet alone because of its high water content making it an almost utter impossibility for a cow to eat enough to sustain life and produce large amounts of milk at the same time. Our experiments have shown that a cow weighing about 1000 pounds will do well on 50 to 60 pounds of beet pulp, 8 to 10 pounds of hay and 8 to 10 pounds of grain as a daily ration, and this for a comparatively long period.

Owing to its great bulk, beet pulp cannot be profitably hauled long distances. The consumption, then, will necessarily be confined to those dairies which are either in the immediate neighborhood of beet sugar factories or in ready communication therewith by rail. When exposed to the air for some time the surface of a pile of beet pulp will decay to the depth of 3 or 4 inches. It should be stored, therefore, so as to have as little exposed surface as possible, and a good, strong silo probably affords as ideal storage room as can be made.

## THE FIELD.

### Flax Growing.

We have many inquiries about flax growing for seed. It looks as though this product might assume greater prominence in this State. We learn from the San Jose Mercury that Mr. R. Mauvais is now endeavoring to get the hay and grain farmers of Santa Clara valley interested in the production of flax. The time has passed when there was money in growing wheat, and the profits for hay are very uncertain. Such being the case, he believes that it would be advisable for many of the farmers of the valley to turn their attention to the growing of flax, which is just as easily cultivated as cereals, and will grow on lands that are adapted to cereal culture and which requires no more labor than grain growing.

**TO CULTIVATE FLAX.**—The land should be well cultivated before seeding by a thorough plowing after the weeds have started and by harrowing fine. The flax seed can be sown as soon as grain, and in fact the whole process of flax culture is similar to that of grain growing. Early sowing, as with wheat, does the best, and frost has no more effect upon flax than upon wheat. The ground should be prepared by plowing deep and well as soon as the weeds have started after the first rains. After fifteen or twenty days, when the weeds will have well started again, harrow thoroughly both ways, pulverizing the ground well. Immediately sow the flax, harrowing once. Upon good soil sow from thirty-five to forty pounds per acre. Mellow or alluvial soil, especially if a little dry, should be rolled or smoothed; heavy or adobe soil should not be rolled. Sow as early as possible—later on than the beginning of February. Soil and moisture being right, the early sown flax will insure a plump, heavy seed, the bolls filling well, making a fine yield of flax. Upon strong, rich soil fifty pounds of seed are required.

The flax will grow from 2 to 3 feet in height, and will mature about July, or the same as wheat. It is harvested in the same manner, either by reaping or heading. Stack at once, leave three or four weeks

in stack, when it will go through the sweat. Then thresh, just as grain is threshed.

**THE MARKET.**—There is a cash demand for flax seed in San Francisco at 2 cents a pound, and as much more as it is quoted in Chicago, less freight. It will yield from 2000 to 5000 pounds per acre. The seed will cost about \$1.50 per acre. It can be procured from Mr. Palache, manager of the firm of Kittle & Co., 202 California St., San Francisco, and this firm will pay cash for flax seed at the highest market price. There are doubtless other firms also that will be glad to pay the top price for flax seed, the demand for which promises to outrun the supply for many years to come.

### ANOTHER GROWER'S OBSERVATIONS.

Darwin C. Allen has grown flax in Tulare and San Luis Obispo counties. The soil devoted to its culture in Tulare county, he says, has a light, sandy loam composition, while that in San Luis Obispo is much heavier, running from the heaviest adobe to heavy, black, vegetable mold, both having a free mixture of gravel which prevented compactness in wet winters followed by dry springs or summers. A greater difference both in soil and climate between the two counties can hardly be found in California, yet the average result over three years was substantially the same in both counties. There was this difference, however: less seed was required for the sandy loams of Tulare than for the heavier soils on the coast.

In Santa Clara county there are some lands quite light in character, but most of the area not devoted to orchards is rather heavy soil. San Luis Obispo corresponds more closely to this county both in the quality of its soil and in rainfall and temperature. So I conceive that such treatment as proved successful in the culture of flax in that county ought not to fail here.

**THE TREATMENT.**—Land should be prepared for raising flax by plowing deep, as this plant roots deep and will produce a top about in proportion as its roots project in depth. It will not be necessary to subsoil to produce the best results, but a deep furrow well turned under will supply the roots with genial soil in which to prosecute a deep growth. As it is not subject to injury from frost it is best to sow seed early, as early after the first rains as may be, after the ground has been well prepared. But I found that later sowing paid best after a second plowing if the first plowing had not left the ground mellow and easy to be pulverized by the harrow. Farmers well know that land too wet or too dry when plowed, even after much harrowing, can never be made thoroughly mellow, which is requisite for perfection of growth. In such cases a second plowing a month later, to be followed by immediate seeding, is best not only for flax, but for seeds in general. The better price, however, for which flax sells will more than repay the cost of second plowing.

**AS TO SEEDING.**—There is danger of overseeding in flax culture. On land in San Luis Obispo county on which I sowed but thirty pounds per acre I pulled up the growth of single seed which bore 150 vigorous bolls, making about 1200 seeds produced by this single stalk. Had my seed been scattered at exactly proper distance from each other I have no doubt but the result would have been very nearly uniform. So I would say to those about to sow this seed that great effort should be made to put about thirty pounds of the best seed upon the acre, as evenly placed as can be, and for that purpose I believe close drilling to be the best. There is no soil, I believe, in this county which will properly bear more than thirty-five pounds of seed. This crop is favored by a long season of growth—the longer the better—and it continues to increase in weight until thoroughly ripe.

The crop will be abundant in Santa Clara county if proper work has been done in its seeding. Freight is low, and the farmer there will not find an easy and ready market, but he will appropriate to himself that large share of the crop which the rates of transportation take from the farmer of more remote counties.

**THE CROP.**—The weight of the crop produced here will vary, of course, according to the kindliness of the season but more largely according to the character of the work but upon it. The heavy gravel adobe soils of San Luis Obispo will produce under good farming from 1200 to 1800 pounds per annum per acre of plump, heavy seed fully as good as is raised in Illinois, Indiana or Iowa or in Oregon. Santa Clara county has a more reliable rainfall than San Luis Obispo, especially late in spring, when it is very beneficial to this crop; and here we should produce flax seed which will remunerate us far better than wheat or barley. If we would make it a feature of our valley the fiber would be and addition to the crop nearly as valuable as the seed.

The Department of Agriculture has advertised for bids for furnishing seeds to the Department for the usual distribution. Bids will be opened in Washington on December 12th, about three months earlier than the opening last year. The early date is a concession to the Pacific coast bidders in order to give them an equal opportunity with those having later crops.



## Agricultural Review.

### BUTTE.

**PRUNE BUYING.**—Chico Record: D. D. Brooks and Anthony Lowe have visited many of the prune growers about Chico and vicinity, and have purchased in the neighborhood of 300 tons of prunes. This leaves only about fifty tons outside of these purchases and the amount which has been secured by the Cured Fruit Association.

**ORANGE SHIPMENT.**—Oroville Register, Nov. 22: Seven carloads by freight and ten carloads by express of oranges have been shipped up to date from this town. Yesterday, by express, there were sent 497 boxes, not included in the above account. Since Sunday last 2300 boxes of oranges have been shipped by express.

### FRESNO.

**RAISIN PACK FINISHED.**—Fresno Republican, Nov. 22: The packing season has now about closed. The pack of first crop raisins this year will amount to about 3000 cars. The second crop, which was delivered to the packing houses, has been kept separate. The outside first and second crop has been put on the market and sold away under Association prices, but the effect of those goods on the market will not be felt much longer. The directors are confident of their ability to sell the entire crop this year. Thus far the Association has advanced 4 cents a pound on goods packed out, but owing to the slump in the Eastern market at present future advances will be made in two installments, half now and half when the goods are sold.

### KINGS.

**GOOD FEED PROSPECTS.**—Hanford Journal, Nov. 23: Foxtail hay is beginning to appear above ground, brought up by the abundant rains. The wild feed will be a great boon to the stockmen on this side of Kings river, while the abundant showers on the west side will make the alfalfa and other feed spring up over there.

**CANNED PEACHES FOR UNCLE SAM.**—Tulare Times, Nov. 22: The Fontana Cannery at Hanford has sold to the U. S. Government 1000 cases of canned peaches. This is the second lot bought of this cannery by the Government. The fruit is to be shipped to the Philippine islands for use by the army.

### LAKE.

**LAKEPORT TO HAVE A CANNERY.**—Clear Lake Press, Nov. 22: The Lakeport cannery proposition has already secured enough subscriptions to ensure its successful launching, the amounts subscribed to date being \$1450.

### LOS ANGELES.

**EXPERIMENT STATION TO ISSUE BULLETINS.**—Pomona Progress, Nov. 22: Prof. C. H. Shinn, inspector of agricultural experiment stations, of the University of California, has arranged with J. W. Mills, foreman, for the publication of a bulletin regarding citrus culture next year. The station heretofore has not issued any kind of printed bulletin for general circulation. Mr. Mills will investigate the industry from a practical standpoint, and the result of his observations will be published some time next summer.

### MENDOCINO.

**FALL WOOL SALE.**—Ukiah Press, Nov. 23: The price for fall wool, while not so good as desired, is certainly an improvement over four years ago. Yesterday the market revealed an 11@11½-cent feature, and considerable was sold at those figures.

**SALES OF FALL WOOL.**—Cloverdale Reveille, Nov. 24: There is stored at Crane's warehouse in Ukiah between 700 and 800 bales of wool, or about 200,000 pounds. Quite a number of growers have sold already at from 11 to 11½ cents per pound. The highest price paid here so far is 11½ cents for extra choice.

### NAPA.

**FRUIT TREES IN BLOOM.**—St. Helena Sentinel, Nov. 22: An unusual sight for this season of the year is the blossoming of fruit trees, particularly pears. The blossoming seems to be general, and, according to predictions of old timers, denotes a short crop next year, as the buds will undoubtedly be killed by the winter frosts.

### ORANGE.

**GREAT DAMAGE TO CELERY CROPS.**—Anaheim, Nov. 21: Three hundred cars is the estimate put on the loss of celery in the peatlands as a result of flood from rains. To date, only about thirty cars, of a total of 1500 expected from the field, have been shipped. The flood will seriously affect the marketing of the crop and its bearing in the Eastern trade.

### RIVERSIDE.

**HEMET OLIVES.**—Hemet News: The young olive orchards on the Hemet tract

have begun to bear, and growers are now busy harvesting their crop. Mr. Babcock expects to export 1000 gallons to Chicago, in barrels that hold from fifty to seventy-five gallons each. The barrels are made in Los Angeles. In Chicago the olives will be put in bottles and placed on the market at a fancy price, for Hemet olives have achieved fame in that city. Mr. Babcock's trees are five years old. This year his crop is double what he expected. His orchard consists of fifteen acres.

### SAN BERNARDINO.

**COLTON ORANGE CROP.**—Los Angeles Herald: The outlook in the Colton district for a large crop of oranges of exceptional quality is very encouraging. The fruit is of unusually large size and will be smooth and thin-skinned. Holiday shipments from Colton have begun and before December 10 it is probable that about twenty carloads will have been applied to the holiday demand. The Colton Fruit Exchange will after the holiday pack is finished suspend until January 1, when the regular season begins. The Colton Fruit Exchange has the largest packing house in the State. It controls nearly 90% of the Colton fruit and is working this year with an increase of 15% over its membership of last year. The members number 120 and about forty employees are kept busy in the packing house handling the fruit.

**REDLANDS ORANGE SHIPMENTS.**—Redlands Facts, Nov. 24: Almost twenty-three cars of oranges have been shipped from Redlands thus far, against less than seven cars up to the same date last year. There is less than a car's difference in the shipments of lemons for the two years. For this season up to date the lemon shipments from Redlands aggregate 1743 boxes.

**CHINO VALLEY FARMERS' CLUB.**—San Bernardino Times-Index, Nov. 23: The Chino Valley Farmers' Club has been organized, with a large number of Chino's farmers and growers as members. The officers of the club are: President, J. W. Mills; vice-president, V. Gustafson; secretary, Edwin Rhodes; Treasurer, Edward Stone. The farmers have organized for mutual protection as well as sociability and educational purposes. They will meet to study and discuss matters of importance pertaining to agricultural pursuits and farm life, furthering agricultural progress, advancing improvements in methods and practice, fostering better social relations, working together to improve the market and secure cheaper transportation—in fact, fostering all that furthers the interests of those engaged in rural pursuits and developing a feeling and interest in each other. Clubs similar to this are being organized all over the State, and it is expected that within a few years these district clubs or associations will affiliate with each other and form a strong, united State organization.

### SAN LUIS OBISPO.

**FARMERS HAPPY NOW.**—San Miguel Messenger, Nov. 23: The wide-awake, industrious farmers of this section were all ready for the generous downpour of rain. Large acreages have been plowed and a large portion of it is already seeded. These farmers have no regrets and are seen in town with beaming countenances and broad smiles.

### SAN MATEO.

**WOOD TICKS KILL HORSES.**—Redwood City Democrat: Henry McGarvey, who farms a portion of the Brittan ranch, lost four horses last week under most unusual circumstances. The animals were allowed to run at large on the adjacent foothills and became covered with thousands of wood ticks. Efforts were made to remove the pests, but without avail. Blood poisoning set in and the animals died. P. J. Maloney of Menlo Park also had four valuable colts in the same pasture, three of which died from the same cause and the fourth is still in a precarious condition. He estimates his loss at \$400.

### SANTA BARBARA.

**EUCALYPTUS FOR PILING.**—Los Angeles Post: The eucalyptus has been experimented with as a piling for many years at Santa Barbara. It is now proved that the blue gum makes in every way the best pile for our coast. It is better and more resistant to the teredo and limnaria than even a creosoted spruce pile from Oregon. The eucalyptus piles sell in Santa Barbara for from \$5 to \$10 a pile. A first-class pile must be 50 feet in the clear. This brings the maximum price. The endurance of the pile varies with the condition of the sap flow when it is cut. An acre of eucalyptus in a favorable location can produce at least 1000 first-class piles. Cutting this estimate in two, we still have a return of \$5000 to the acre. It is astonishing to hear that fine eucalyptus for piling is still being cut for firewood.

**WINTERING ARIZONA CATTLE.**—Santa

Barbara Herald: Two trainloads of cattle have lately arrived from Arizona. If the report is true that several thousand Arizona cattle will be shipped to this county to be wintered, the faith of the cattle men in the promised wet year is established.

### SANTA CLARA.

**GROWING FLAX.**—San Jose Mercury, Nov. 24: Several well known farmers have determined to plant from twenty to forty acres to flax this season as an experiment, and others are contemplating the subject. The method of growing flax is as follows: The land should be well cultivated before seeding after a thorough plowing after the weeds have started and by harrowing fine. The flax seed can be sown as soon as grain, and, in fact, the whole process of flax culture is similar to that of grain growing. Early sowing, as with wheat, does the best, and frost has no more effect upon flax than upon wheat. The ground should be prepared by plowing deep and well as soon as the weeds have started after the first rains. After fifteen or twenty days, when the weeds will have well started again, harrow thoroughly both ways, pulverizing the ground well. Immediately sow the flax, harrowing once. Upon good soil sow from thirty-five to forty pounds per acre; mellow or alluvial soil, especially if a little dry, should be rolled or smoothed; heavy or adobe soil should not be rolled. Sow as early as possible, no later than the beginning of February. Soil and moisture being right, the early-sown flax will insure a plump, heavy seed, the bolls filling well, making a fine yield of flax. Upon strong, rich soil fifty pounds of seed are required. The flax will grow from 2 to 3 feet in height, and will mature about July, or the same as wheat. It is harvested in the same manner, either by reaping or heading. Stack at once, leave three or four weeks in stack, when it will go through the sweat. Then thresh, just as grain is threshed.

### SOLANO.

**DEHORNING DAIRY CATTLE.**—Dehorning cattle is a practice that is becoming quite popular with our local dairymen. J. A. Kerr and J. R. Bloom recently purchased a dehorning implement and have removed the horns from most of the animals in their herds. The operation is simple and is said to be comparatively painless to the animal operated upon. It is said that dehorned cows are more peaceable than those that have not been treated.

### SONOMA.

**SOFTSHELL WALNUT.**—Sonoma County Farmer: J. H. Hornbeck has Santa Rosa Softshell walnut trees that came into bearing at five and six years from planting and have borne ten and eleven years since, usually a full crop. Two jars of these handsome nuts, running thirty-five to the pound, were much admired as a part of the exhibit of the Horticultural Society at the late District Fair. Mr. Hornbeck also has the harder shelled Preparatians, of the same age, which have only borne seven partial crops in the same time, and the trees are not over one-half as large. The Franquette, one of the French varieties found in Mrs. Mary Vrooman's orchard, is a rich, large, elongated nut, a little harder than the softshell, but has not borne enough yet to warrant any estimate. The tree is a later bloomer by a month, and thus often escapes the late frost.

**CROP PROSPECTS.**—Santa Rosa Press-Democrat, Nov. 24: The heavy downpour of rain for some days has been very beneficial to the farmers. The grass never looked better at this time of the year, and the early-sown grain is coming up finely. There will be more acres sown this year than has been the case for many years. The olives are ripening very fast. There is a large crop and of good quality. People around here are busy pickling the fruit.

**MAKING WINES IN SONOMA CELLARS.**—Santa Rosa Republican: Many wineries in Sonoma county are manufacturing large quantities of fortified sweet wines this year. Among those who are making sweet wines are: Italian-Swiss Colony at Asti and Fulton; California Wine Association at Windsor and Geyersville; Hotchkiss & Miller Co. at Windsor; Manager Lumsden, at the DeTurk winery, in this city, and Mr. Korbell, at Korbell Station.

**APPLES VS. PEACHES.**—Analy Standard: Considerable interest is being manifested among the grangers of this place in regard to peach trees and peach orchards. It is well known that some portions of the township are not adapted to peach culture, and, in consequence, the farmers are considering what to plant to replace the dead peach trees. Some orchardists are seriously considering digging up their entire peach orchards and replacing them with other fruits. The apple meets with general favor, especially the Gravenstein, and also some of the other leading varieties

which are good both for drying and shipping.

### TEHAMA.

**BIG LAND SALE.**—Red Bluff People's Cause, Nov. 24: A deed was filed to-day transferring from the San Francisco Savings Union to D. C. Mitchell, for a consideration of \$11,660, several tracts of land embracing 2120 acres in the western part of Tehama county.

**OLIVE CROP.**—Red Bluff News, Nov. 25: The olive crop at Corning is nearly gathered, and part of the same is now on the market. The pickled olives are selling readily at 35 cents per quart. The trees, though young, bore well, and the fruit is of excellent quality.

**REPORTED SALE OF FINNELL RANCH.**—Red Bluff News: It is reported that a large portion of the Finnell lands has been purchased by the American Beet Sugar Co. of San Francisco for the sum of \$200,000 and that a sugar beet factory will be built near Tehama. About 1500 acres of the Finnell lands are to be sown to sugar beets, about 400 acres near Tehama, 450 acres near the home place and the balance on the land near the Fount Finnell place. Several small parcels of the Finnell lands on different parts of the ranch have heretofore been sown to sugar beets, and the quality, size and quantity to the acre has been very satisfactory.

### TULARE.

**FARMERS BUSY.**—Tulare Register, Nov. 23: Considerable seeding has already been done in the southern part of the county, a number of wheat growers each having in from half a section to 2000 acres. There is little disposition to want to see how the season will turn.

**PRUNE BUYERS TOO EXACTING.**—Tulare Register: Complaint is made that the Association requires too much drying on prunes. Those who take pride in their work do not like to turn out prunes that rattle like pebbles, to say nothing of the loss of a few hundred pounds of moisture in each ton which justly belongs there to make a high-grade article. It may be that it is cheaper to put in artificial moisture than to buy the natural juice.

### YOLO.

**BUCKWHEAT A PROFITABLE CROP.**—Woodland Mail: Fred Van Lew has been quietly buying buckwheat at Knights Landing for the Del Monte Milling Company of San Francisco. He has succeeded in securing several choice lots, paying \$1.70 to \$1.80 for the same. This is one of the best paying crops raised in this locality, very seldom bringing less than \$1.50 and as high as \$2.40 per hundred.

**YOLO WINERY OUTPUT.**—Woodland Mail: Nearly 1000 tons of grapes were crushed at the Yolo winery this season, and twice that amount would have been handled if the grapes could have been obtained. The output has been the equivalent of nearly 200,000 gallons of dry wine, and has all been sold.

### OREGON.

**BETTER PRICE FOR APPLES.**—Ashland Tidings, Nov. 19: Henry E. Dosch, secretary of the Oregon Board of Horticulture, is of the opinion that Oregon apples will be worth \$1 per box inside of three weeks, and bases his assertion on the big jump in prices of apples in the New York market. Baldwin apples have advanced from \$1.50 to \$2.50 per barrel; Kings, from the same price to \$2.50 and \$3 a barrel; York Imperials, from \$1.50 to \$4 a barrel. Red table apples will bring in New York over these prices an advance of 25 to 50 cents a barrel. As soon as these prices become known, thinks Mr. Dosch, Oregon apples will naturally rise a notch in price, because the local market is sympathetically affected by the New York quotations. He advises growers to be in no hurry to sell. The growing favor of the better class of Oregon apples for the export trade, taken together with the failure of the apple crop in the main Eastern belts, is a good indication that prices will hit the top notch. Quite a number of apples have been placed by dealers upon cold storage for Christmas trade, which helps to strengthen the market.

## Horse Owners! Use

GOMBAULT'S

## Caustic Balsam

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.



## THE HOME CIRCLE.

## A Thanksgiving Song.

For sowing and reaping, for cold and for heat,  
For sweets of the flowers, and gold of the wheat,  
For ships in the harbors, for sails on the sea,  
O, Father in Heaven, our songs rise to Thee.

For parents who care for us day by day,  
For sisters and brothers, for work and for play,  
For dear little babies, so helpless and fair,  
O, Father, we send Thee our praise and our prayer.

For teachers who guide us so patiently on,  
For frolics with mates when our lessons are done,  
For shelter and clothing, for every day's food,  
We bless Thee, our Father, the giver of good.

For peace and for plenty, for freedom, for rest,  
For joy in the land from east to the west,  
For the dear starry flag, with its red, white and blue,  
We thank Thee from hearts that are honest and true.

For waking and sleeping, for blessings to be,  
We children would offer our praises to Thee;  
For God is our Father, and bends from above,  
To keep the round world in the smile of his love.

—Margaret E. Sangster.

## The Twenty-One Club.

On Old Man John Barton's eightieth birthday there was a family reunion at the homestead. The Bartons are numerous and clanish, consequently they gathered in strong force at the big, square white house on the site where their great-grandfather, John Barton, built the first log cabin north of the Wishshinsky.

Family reunions are nothing uncommon with the Bartons, but they were features that distinguished this party from other affairs of the kind. For one thing, it was Old Man John's first and last eightieth birthday. Then all the John Bartons were present. John is a good, solid, sensible name, and the Bartons rather like it; there is Old Man John, and John Junior, and John third, and Little John, and Johnny K., and Danville John, and John the Blacksmith, not to mention John Barton Todd and young Johnny K. Barton Morton. But the great distinguishing feature of the party was the founding of the Twenty-One Club.

Old Man John was interested and moved when he counted up and found there were nine young men of the Barton family who would attain their majority before the year was out.

It was at the time of the Easter vacation, and all of the nine happened to be at the homestead birthday party. They were gathered into the big parlor—three young farmers, a Harvard junior, a medical student, a law student, a musician, a telegraph operator and a drug clerk—all trying to look dignified and unconscious as grandfathers, uncles, cousins slapped them the on back and called them fine young roosters, and joked about beardless cheeks and mustaches like the down of a half-fledged pigeon.

"Nine new votes for the straight Democratic ticket!" said John Junior, who was a member of the State Legislature. "That ought to turn the scale in Christopher county next fall."

"I tell you it makes the old man's heart big with pride to see so many fine young shoots around the parent tree," said Old Man John in his loud, hearty tones. "The older generation is nothing but half-dead branches hanging on until a gust of wind snaps them off; and it is a comfort to know there is plenty of sound, sappy, heart-whole Barton timber coming on—good American timber, too, the sort the Government needs for props." Old Man John had been a lumberman in

his day, so he used a lumberman's figures.

They were talking in that way, gushing, flattering and applauding the foolish-looking young men, when a pretty, brown-haired girl stood beside Old Man John's chair, her eyes bright and saucy.

"I, too, will be twenty-one soon, grandfather," she cried gayly. "Next Fourth of July, the nation's birthday. Why do you not call me a promising young sapling?—a birch sapling?"

The old man squeezed the plump little hand of the merry young school-ma'am, his favorite grandchild, and told her she was a moss rose, a honeysuckle and a rare white lily. The boys, relieved to find themselves no longer the center of interest, laughed teasingly and told their cousin she was only a girl and had better pass herself off as a minor as long as she could—her coming of age amounted to nothing, for she would have no vote any way; she could never be an American sovereign and help rule 90,000,000 of people through the ballot box, the glory and the pride and the sacred responsibility of citizenship were not for her.

Pretty Marian, secure in the admiration and loyal allegiance due her as the only young lady in a family burdened with so many bothersome and ungainly young males, did not mind the laughter and teasing in the least. But when the misguided Harvard student adopted a patronizing tone and hinted that she was a new woman and intended to assert her equality at the polls as well as in the matter of birthdays, Marian stood up very straight, with slight flush on her cheeks.

"No, I do not want to vote—not yet," she said calmly. "I fear it might be taken for granted that I have no ideas of my own and might be counted upon to walk up like a sheep and vote the straight Democratic ticket just because the Bartons usually belong to that party."

"No," she went on without noticing the laughter and applause, "I could not consider myself fitted for the glory and the pride and the sacred responsibility of citizenship while I boasted of a better acquaintance with the formation of the ancient Greek republics than with the constitution and political history of the United States."

The Harvard man fell back and drew in his breath sharply as a sign that he had been hit; but the little school teacher went on undisturbed, and it was the good-looking drug clerk who clapped his hands to his heart at her next shot.

"Being only a girl, I would lack courage to assume a share in the government of 90,000,000 people when I have never even looked at the instrument forming the basis of that government, the Constitution of the United States. If I was likely to become a voter I might consider in my duty to inform myself about some of the national questions and the attitude of the parties, and about political methods. At any rate, I feel sure I would read something in the newspapers besides the baseball news, and in addition to being able to give biographies of the crack players of the league teams I would know the names and the places of the members of the President's Cabinet; also I would find out whether or not the unit rule has anything to do with the way a Speaker of the House runs things."

"Why, do you know," and she threw back her head like her father, the judge, when he gave a charge to the jury—"why, do you know, if I had the prospect ahead of me of having a voice in the management of my country, if I, like you boys, should have the rights and the power of the American voter when I reach twenty-one, I would accept the responsibility with the spirit of the Czar of Russia receiving his crown on his knees, with tears running down his face; I would do as the knights of old did before they took the solemn vows of their knighthood: I would go off alone and strengthen my soul by fasting and prayer. That is what I would do if I was going to vote next fall!"

There was such a roar of applause

and laughter that Marian darted out of the room in sudden confusion. The next minute the dining room doors were thrown open and they all flocked out laughing and talking noisily—all except Marian; she disappeared into the kitchen and stayed there the greater part of the afternoon, making herself useful.

After dinner some of the boys met on the porch.

"Marian rather pitched into us, didn't she?" remarked Will Barton.

"The baseball and Cabinet members' stab was meant for me," announced Will's twin brother Dan. "Wonder who was tripped up on the unit rule?"

The musician, who was dangling his long legs over a railing and gazed off dreamily at the hills, turned without a word and screwed up his face into such an irresistibly funny wink that the others shouted with laughter, and Johnny K. and the Harvard man hurried up to join in the fun.

"I dare say it would not hurt any of us to know more about such things," the Harvard man observed thoughtfully. "I for one will admit that I ought to be better informed as to the duties and privileges of American citizenship."

They all appreciated the astonishing modesty of Jimmie in making such an admission, and showed their appreciation by agreeing with him promptly. Then Johnny K. straightened himself up and threw away his cigar.

"Why do not you fellows do something?" he said. "There are nine of you who will vote for the first time next fall, and sixty or seventy others, possibly, throughout the county. While acquiring a little information yourselves you might influence some of the others to take a more intelligent interest in the institutions of the country. You know the theory; the higher the intelligence and virtue of the average voter the nearer we approach the ideal republic. Why don't you do something for your country to celebrate your coming of age?"

Now Johnny K., a rising young lawyer, lately elected district attorney, a keen sportsman and a good fellow, was the admiration and secretly cherished model of all the boys, especially of his younger brother, the Harvard man; consequently his suggestion carried.

That evening Marian walked home through the fields with her cousins, Dan and Will.

"Well, we're going to do it," Dan began.

"Do what?"

"The Czar of Russia receiving his crown, the knight taking his vows act. Only we will have an American modernized version; fasting might not agree with the fragile, up-to-date constitution. Behold in me the treasurer of the Twenty-One Club!" and he rattled the silver in his pockets.

"Yes, we have formed a club," Will explained. "Object, to study the constitution of the United States and—er—to prepare ourselves for citizenship. We intend to take in as many fellows who come of age this year as we can get to join us. The club will buy books and papers for circulation among the members."

"Jimmie is president because he knows parliamentary rules and how they do such thing at Harvard," Dan interrupted. "John third is secretary, and Johnny K. is legal adviser. Johnny K. is out by age and cannot be a regular member, and he seemed to feel he had been born too soon. I tell you he's great, Johnny K. is. He said you deserved a medal for stirring us up the way you did."

"Oh, he was not in the room. He could not hear me. Oh, I hope not!" exclaimed Marian in distress. "I made a great fool of myself. I hope he did not hear me."

"I don't know. We told him all you said and more," Dan said, consolingly, as he opened the gate for her.

"Oh, by the way, Marian, you're a member of the Twenty-One Club by acclamation at Johnny K.'s suggestion," Will called after her as she passed up the walk.

The club thus formed ran a quiet and uneventful course for some months. The nine original members were

scattered at their various places of work and study, but many new members were added, letters were exchanged and the books, pamphlets and newspapers of the club "course" were in lively demand.

It was not until the latter part of June that people in general began to hear much of the Twenty-One Club. Then it was known that Christopher county was to have a big Fourth of July celebration at Bomtown, the county seat, and that a number of young men "comin' twenty-one" had been invited by the mayor and the committee to be present as guests of honor.

But the interest and excitement stirred up by the preparations for the celebration were felt throughout the whole county. It was known that the famous Ringgold band from the State capital was to be present at the expense of a single citizen—Old Man John Barton. The announcement that the young men of the Twenty-One Club would be treated to a free dinner aroused much comment and curiosity. Then the lists of the speakers' names fairly took away the breath of the farmer who had read in his weekly paper for years of the brilliant and witty Congressman M—, of the magnetic and forceful Senator K—, without expecting to have a chance to hear them.

When the great day came the pretty park at the edge of the town was filled to overflowing with gayly expectant town people and country folks and mountaineers, all animated and half-deafened by the patriotically cumulative strains of the Ringgold and other less famous but equally ambitious bands. On the flag-draped speakers' stand the local luminaries were almost lost from sight in the exceeding brilliancy of an ex-governor, a United States Senator, a member of Congress and an ex-candidate for Vice-President. In front of the stand, dividing public interest with the great men, sat a group of forty or fifty youths—the Twenty-One Club.

When each noted speaker had had his turn and had been cheered until the trees shook, then the Twenty-One Club arose to its feet as one man and with all the breath it had been left, lifted up such a mighty shout as made the previous din seem tame.

"Johnny K. Barton! Johnny K. Barton!" was what they yelled.

Now, the young district attorney, knowing the Twenty-One Club, had a few well chosen words, a few happy phrases ready for just such an emergency. As he swung himself up on the platform and stood there in front of those distinguished men who had long been the objects of his critical admiration, and felt that their surprised, questioning eyes were boring holes through his shoulder blades, all those graceful words, all that fine rhetoric floated off and left him for one hideous moment feeling that the universe was a vacuum. Then he saw the eager, expectant faces of the boys and another eager, expectant face farther off under a big white hat, and he knew he did not need the escaped thistle-down rhetoric. The occasion, the waiting audience, the inspiring thought of immense results that might spring from words of his, presented to those young men who believed in and were so thoroughly in sympathy with him, was preparation enough. There are some members of the Twenty-One Club who will never forget certain words he uttered; and the memory of those words and of that one day on the threshold of manhood gives added value and meaning to manhood itself and to patriotism.

The young men were not alone in considering their club a success. It was not only the approbation of the distinguished visitors, but also the enthusiastic support of the general public. Before the day of celebration was over a new club, or rather a new chapter of the club was organized by youths who would reach their majority during the following year. Thus the Twenty-One Club promises to become a permanent institution in Christopher county.

Marian rode home from the celebra-



tion in Johnny K.'s buggy. They took the long way round, as Johnny K. liked to do when he had his pretty second cousin beside him, and the sagacious mare chose her own gait. Consequently they were the last to arrive of the returning party.

As they approached the house in the sultry, dusty dusk Marian saw a group of dark figures beside the gate. "Those awful boys!" she exclaimed, and started in confusion to draw her glove over something that sparkled on her left hand.

Johnny K. stopped her. "They will never notice," he said. "And what if they do?"

The nine Barton boys formed in lines on each side of the walk and waited in solemn silence as Marian advanced toward them doubtfully. Then President Jimmie stepped forward rather awkwardly for a Harvard man and handed her a huge bouquet of lilies and moss roses. He made a little speech in which Marian caught the words "birthday," "cousins, and "Twenty-One Club."

She began to thank them prettily, but Jimmie interrupted her. "There is a case attached to the stems," he explained.

Further speech was prevented by the whir and whiz and bang of a sudden discharge of fireworks. By the scintillations of the pinwheels and the red, green and yellow light of rockets Marian opened the little leather case and saw a novel and beautiful brooch, in the form of an American eagle in gold bearing a small enameled flag in his talons. On the accompanying card she read:

"To a New Woman; from nine voters."

The little school teacher turned as though she would like to hug somebody, and the nine voters retired precipitately.

"We had a notion to give you a diamond ring, only we knew Johnny K. wanted to do that himself," the irresistible Dan told her.

Marian laughed and blushed.

"Boys, the nation and I have had such a beautiful birthday!" she said. —The Independent.

#### Hullo.

When you see a man in woe,  
Walk right up and say "Hullo!"  
Say "Hullo!" and "How d'ye do?"  
How's the world a-usin' you?"  
Slap the fellow on the back;  
Bring your hand down with a whack.  
Walk right up, and don't go slow,  
Grin an' shake an' say "Hullo!"

Is he clothed in rags? Oh, sho!  
Walk right up and say "Hullo!"  
Rags is but a cotton roll,  
Jest fer wrappin' up a soul;  
An' a soul is worth a true,  
Hale and hearty "How d'ye do?"  
Don't wait for the crowd to go,  
Walk right up and say "Hullo!"

When big vessels meet, they say,  
They saloot an' sail away.  
Jest the same are you an' me,  
Lonesome ships upon a sea,  
Each one sailin' his own log  
For a port behind the fog.  
Let your speakin' trumpet blow—  
Lift your horn and cry "Hullo!"

Say "Hullo" and "How d'ye do?"  
Other folks are good as you.  
W'en you leave your house of clay,  
Wanderin' in the far away;  
W'en you travel through the strange  
Country t'other side the range,  
Then the souls you've cheered will know  
Who you be, and say "Hullo!"

—S. W. Foss.

#### Cocoa Caramels.

Put into a saucepan over a moderate fire two cupfuls of molasses and one cupful of sugar, with butter the size of half an egg. Put three tablespoonfuls of cocoa and one tablespoonful of cornstarch into a cup and gradually mix it with one-half cupful of sweet milk, stirring until it is smoothly mixed. Stir the mixture slowly in with the contents of the saucepan, then stir it while boiling until a bit of it dropped on a buttered tin will harden like thick wax. Boil a minute longer (no more), and then pour out in a large buttered pan. Set it in a cool place, and, when nearly

cold, cross it off with a buttered knife, so that it will break in squares when quite cold. Keep in a cool place (if you can keep them). If time is plentiful, it may instead be worked into little cubes and wrapped in squares of buttered tissue paper when just cool enough to handle.—Farm and Fireside.

#### Hints on Jelly Making.

Jellies are all made alike after the juice is obtained. This is boiled twenty minutes, the sugar is then added, and, as soon as it is entirely dissolved, the juice may be poured into the glasses. The following points, if carefully observed, will do much to prevent possible failures:

The sugar should be heated before being added to the juice.

The "twenty minutes" should be counted after the boiling begins.

The boiling should be brisk, but not violent.

There is no need of skimming until just before pouring the jelly; it is wasteful.

Cook about one and one-half pints of juice at a time; never more than two pints.

Nearly all jellies are improved in flavor by the juice of a lemon to each pint.

Crabapples, which should be cut up, wild plums and the dry fruit and the parings, cores and seeds from quinces and apples must be almost covered with water and boiled until soft, to obtain the juices. Berries need no water, but should be slowly heated until all their juice is freed.

Grapes just turning are better than ripe ones for jelly.

Jelly bags for straining the cooked fruit must always be scrupulously clean, with absolutely no flavor of soapsuds remaining in them.—Woman's Home Companion.

### DOMESTIC ECONOMY.

#### Hints to Housekeepers.

A new way of serving poached eggs is to pour browned butter over slices of toast before placing the egg upon it, and sprinkling the whole with finely chopped pickle.

To make a delicious lavender water, mix together, shaking well, half a pint of rectified spirits of wine, two drams of essential oil of lavender and five drops of otto of roses.

Beans may be preserved in salt for winter use. They should be set away in earthen crocks, an equal quantity of beans and salt. Soaked and boiled they will prove fresh and delicious.

A simple and delicious dessert is made by filling a mould with sliced oranges and bananas and pouring over a foaming sauce made by adding sugar to the beaten yolks of eggs and a spoonful or two of sherry or rum. The mould is then buried in ice and salt for several hours.

When purchasing sheer linen handkerchiefs it is well to remember that pure linen may be very readily recognized by moistening the tip of the finger and drawing the fabric over it. Linen will immediately show the moisture through its meshes, while cotton will absorb it.

To pickle cauliflower, break it apart, and to one large head add two small red peppers. Dissolve a half-cupful of salt in water enough to cover the vegetable and leave it for six or eight hours. Then drain, and turn it into a quart of vinegar, with which two tablespoonfuls of mustard have previously been boiled. Boil fifteen or twenty minutes until a fork will readily pierce the cauliflower.

A silk shade is a desirable finish to the hall door, as it permits the regulation of light in the hall. It is mounted on the usual shade roller, and should be finished at bottom and sides with a wide hem. Olive green, a deep yellow or a rich, dark red is a good choice. The light of the hall, whether north or south, together with the coloring of wall and woodwork, needs

to be considered in choosing the color. Of course the shade is in addition to the lace sash curtain next the pane.

To improve the flavor of an apple pie sprinkle the fruit with lemon juice after it is filled into the crust, and cover it with tiny pieces of butter. Then add the sugar and nutmeg or cinnamon. Children always, and sometimes those of a larger growth, prefer a sprinkling of caraway seed for flavoring.

The approved method of ridding a kitchen of rats is, according to cooking school experts, to starve them out. This statement must be literally construed and means closely covered boxes and barrels, no crumbs nor particles of any food, raw or cooked, left about on closet shelves or in any other place accessible to them. This treatment persevered in will bring about, after a short time, the desired result.

Cassava bread is made from the roots of the cassava plant in Barbadoes. Naturally it is very nutritious, easily digested and highly recommended by the medical faculty. It is not only excellent for invalids, but for every one. Served with cheese or with tea it is very palatable. Or crisp it in the oven a bit, then butter it and set in the oven to melt the butter. Serve very hot. From cassava root tapioca is made.

An old way to serve rice may be new to some readers. The rice is par-boiled for five minutes; then drained and put into a double boiler, with sufficient milk to cover, and is cooked until tender, without stirring. Season with salt. When tender and the milk entirely absorbed, it should be poured into a buttered mould and set in a warm oven for about five minutes before being turned out on a hot platter. It may be eaten with a hard sauce or with butter and shaved maple sugar.

Some housekeepers keep in their kitchens strips of clean white muslin an inch or so wide and long enough to go around the pie tins and fasten. These they place about the edges of all juicy pies to keep them from running over. Another preventive for running over is the use of rather deep pie tins that have a broad edge at the top. With these the bottom crust should be slightly moistened with water and the two crusts pinched tightly together below the top of the tin, leaving the crusts a quarter of an inch at the top, free from each other. Then free the bottom crust from the side of the tin all around the edge and press the two forward, separating them at the very edge. After some practice in this way the edge of the pie pan can be made quite decorative, and there will be less danger of losing the juice. In any case generous ventilations must be left in the upper crust.

#### Domestic Hints.

GINGER SANDWICHES.—Ginger sandwiches are made by cutting preserved ginger into thin strips and spreading them between slices of white sandwich bread cut very thin. Small crisp leaves of lettuce hearts are sometimes used with ginger.

LEMON JUICE FOR RICE.—A little lemon juice added to the water in which rice is boiled will keep grains separate. A cut lemon, too, may be used instead of vinegar to make tough meat tender. Rub thoroughly and let it stand three or four minutes before cooking.

OYSTERS A LA POULETTE.—Blanch two dozen oysters in their own liquor, drain and reserve half the liquid. Take half a pint of Bechamel sauce and the saved liquid in which the oysters were blanched, a little salt, a little pepper and let boil. Remove to back of range, stir in the yolks of three eggs, and when it is smooth add the oysters and serve.

CHUTNEY.—Peel and chop six good-sized tomatoes and the same number of tart apples. Mince a dozen figs, put them with the other fruit, and add to them a clove of garlic and a small onion, both grated, a scant teaspoonful

each of ground ginger and cayenne pepper, a tablespoonful of salt, quarter of a pound of brown sugar and a pint of vinegar. Boil all together for half an hour. When cold bottle and seal.

CARROT PIE.—The attention given of late by dietary authorities to the value of carrots as food, has suggested to some housekeepers to experiment with carrot pie. This dish was popular and often seen one or two generations ago, but has not survived with its cousins-german, the squash and pumpkin pie. After the carrots are steamed or boiled till tender they are put through a colander, and proceeded with exactly as in the case of the squash or pumpkin to be used for pie. The filling is used, of course, in a pastry shell, without an upper crust.

KISSES FILLED WITH ICE CREAM.—To make the shells beat to a stiff froth the whites of seven eggs and add to them gradually, beating constantly, two and one-quarter cupfuls of powdered sugar with which has been mixed one tablespoonful of vanilla sugar. Beat until the eggs can be cut with a knife. Then wet a tablespoon in cold water, fill it with the mixture and drop it in this way into sheets of buttered paper. Place the paper on baking tins. Powder lightly with sugar, blow off all that does not stick and bake in a quick oven. Care must be taken that they do not burn. When they are firm on top remove them, take out all the soft part inside, leaving an unbroken shell, and put them back into a cool oven to dry. Fill with any delicate sweet mixture and put two together, sticking them with white of egg, if necessary.

MEAT JELLY.—It requires three and a half pounds of veal and the same quantity of beef. Inferior cuts as free from bone as possible may be bought. Put over the fire in cold water and boil all day until the meat is shredded. When ready to take from the fire add sufficient tomatoes to color the juice, boil up again quickly and add half a teaspoonful of kitchen bouquet. Season with salt, and immediately after taking from the fire add one-half package of gelatine that has been previously dissolved in a little cold water. Strain into a ring mold and set on the ice to cool. It should be a pretty red color. When ready to serve arrange on a platter on a bed of lettuce leaves with the center piled with lettuce hearts and covered with mayonnaise. In making this jelly in very hot weather a little more gelatine is needed.

### RHEUMATISM

No sure cure is yet known for chronic rheumatism. No man living can cure it always. He can try. If he fails he can try another way.

There are many ways. Some harmless; others worse than the rheumatism. Better not take the chance of quack medicines.

Scott's emulsion of cod-liver oil cures rheumatism only by crowding it out by vital force. If that succeeds, it succeeds; if that fails, it fails. It never does any harm.

We'll send you a little to try if you like.  
SCOTT & BOWNE, 409 Pearl street, New York.

COE'S ECZEMA CURE \$1 Large sample mailed free.  
Coe Chem. Co., Cleveland, O.



## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Nov. 27, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

|                | Dec.            | Jan.            |
|----------------|-----------------|-----------------|
| Wednesday..... | 70 1/2 @ 71 1/2 | 71 1/2 @ 72 1/2 |
| Thursday.....  | 71 1/2 @ 71     | 72 1/2 @ 71 1/2 |
| Friday.....    | 70 1/2 @ 70 1/2 | 70 1/2 @ 71 1/2 |
| Saturday.....  | 70 1/2 @ 70 1/2 | 71 1/2 @ 71 1/2 |
| Monday.....    | 71 1/2 @ 70 1/2 | 71 1/2 @ 71 1/2 |
| Tuesday.....   | 70 1/2 @ 70 1/2 | 70 1/2 @ 71 1/2 |

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

|                | Dec.        | Mar.       |
|----------------|-------------|------------|
| Wednesday..... | 5s 11 1/2 d | 6s 0 1/4 d |
| Thursday.....  | 5s 11 1/2 d | 6s 0 1/4 d |
| Friday.....    | 5s 11 d     | 6s 0 1/4 d |
| Saturday.....  | 5s 11 d     | 6s 0 1/4 d |
| Monday.....    | 5s 11 d     | 6s 0 1/4 d |
| Tuesday.....   | 5s 10 3/4 d | 6s 0 1/4 d |

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

|                | Dec.            | May.                |
|----------------|-----------------|---------------------|
| Thursday.....  | 97 3/4 @ 98 1/2 | 1 04 1/2 @ 1 04 3/4 |
| Friday.....    | 97 1/4 @ 97 3/4 | 1 04 1/2 @ 1 03 3/4 |
| Saturday.....  | 97 1/4 @ 96 1/2 | 1 04 1/2 @ 1 03 3/4 |
| Monday.....    | 97 @ 96 1/2     | 1 04 @ 1 03 3/4     |
| Tuesday.....   | 96 3/4 @ 96 1/2 | 1 03 3/4 @ 1 03 3/4 |
| Wednesday..... | — @ —           | — @ —               |

## WHEAT.

With weather wet part of the week, making conditions in the interior just what were needed and had been longed for, conditions here were at same time rendered more unfavorable than they had been for active trading in wheat. Wet weather invariably restricts business in grain circles for the time being, and the generally good crop prospects which result from rains tend to impart weakness to the market. No one of experience would ever select wet, threatening or unsettled weather as an opportune time for unloading wheat. The midst of a Norther, or of a long dry spell, would be much more apt to be attended with best possible results for the seller. While no great quantity of wheat has been changing hands from producers, there has been evidence of shippers buying Dec. wheat on Call Board and putting out May wheat, the latter action keeping the speculative market in their favor, and tending to depress prices for spot grain. This shows how the Call Board, at the maturing of contracts, operates as a club to break down values in the open or spot market. When deliveries on contracts are about due, as is the case at present with Dec., the outside speculative holders are naturally anxious to, and in fact in most instances are compelled to sell, and there are as a rule none but shippers or warehouse men to buy maturing contracts, so they have much their own way in fixing the price. The only encouraging feature of the local market is that numerous additions have been made within the fortnight to the engaged fleet for wheat loading, which is bound to make a material impression on stocks in the State in the near future. The chartered fleet now in harbor has a carrying capacity of fully 80,000 tons. Ships here and disengaged could take about 18,000 tons. Vessels now known to be bound for this port represent a carrying capacity of 180,000 tons.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, 98 1/2 @ 96 1/2 c.  
May, 1901, delivery, \$1.04 1/2 @ 1.03 3/4.  
Tuesday, at regular noon session of Call Board, December, 1900, wheat sold at 96 3/4 @ 96 1/2 c.; May, 1901, \$1.03 1/2 @ 1.03 3/4.

California Milling..... \$1 02 1/2 @ 1 07 1/2  
Cal. No. 1 shipping, alongside..... 97 1/2 @ 1 00  
Oregon Valley..... 97 1/2 @ 1 00  
Washington Blue Stem..... 1 00 @ 1 05  
Washington Club..... 97 1/2 @ 1 02 1/2  
Of qualities wheat..... 92 1/2 @ 95

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

|                      | 1899-1900.            | 1900-01.              |
|----------------------|-----------------------|-----------------------|
| Liv. quotations..... | 6s 3d @ 6s 2d 1/2     | 6s 2d @ 6s 3d         |
| Freight rates.....   | 33 1/2 @ 35s          | 40 @ 42 1/2 s         |
| Local market.....    | \$0 97 1/2 @ 1 01 1/4 | \$0 98 1/2 @ 1 01 1/4 |

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

Prices are without quotable change, but in sympathy with wheat, the market is lacking in firmness. The outward movement is of fair proportions, mainly of special brands contracted for abroad, but trading on local account is slow. South America has been lately drawing more than her ordinary quota from this mar-

ket, the last Panama steamer taking 13,500 barrels for above destination.

|                                |             |
|--------------------------------|-------------|
| Superfine, lower grades.....   | 25 @ 25 50  |
| Superfine, good to choice..... | 2 60 @ 2 80 |
| Country grades, extras.....    | 3 15 @ 3 40 |
| Choice and extra choice.....   | 3 40 @ 3 65 |
| Fancy brands, jobbing.....     | 3 60 @ 3 75 |
| Oregon, Bakers' extra.....     | 2 90 @ 3 25 |
| Washington, Bakers' extra..... | 2 90 @ 3 40 |

## BARLEY.

The market for this cereal has not improved since last review, either in the matter of demand or in prices obtainable. Weather influences have tended to cause buyers to postpone purchasing as much as possible, and, through same influences, holders have, on the other hand, been more inclined to unload. The business doing has been principally in Feed descriptions, low grade or common barley constituting the bulk of present offerings. The speculative market was slow and presented a weak tone.

|                                 |                   |
|---------------------------------|-------------------|
| Feed, No. 1 to choice.....      | 75 @ 77 1/2       |
| Feed, fair to good.....         | 70 @ 72 1/2       |
| Brewing, No. 1 to choice.....   | 80 @ 85           |
| Chevalier, No. 1 to choice..... | 97 1/2 @ 1 02 1/2 |
| Chevalier, No. 2.....           | 85 @ 90           |
| Chevalier, poor.....            | 70 @ 75           |

## OATS.

There are no declines to record in the market for oats. If there is any difference to note, values are being better sustained than they were prior to the recent rains, especially for choice to select qualities, desirable for seed. The demand for seeding purposes has been fairly active, Red oats receiving the most attention, and some sales have been effected at an advance on quotable rates.

|                               |                     |
|-------------------------------|---------------------|
| White Oats, fancy feed.....   | 1 37 1/2 @ 1 42 1/2 |
| White, good to choice.....    | 1 30 @ 1 35         |
| White, poor to fair.....      | 1 20 @ 1 27 1/2     |
| Gray, common to choice.....   | 1 20 @ 1 32 1/2     |
| Milling.....                  | 1 42 1/2 @ 1 45     |
| Surprise, good to choice..... | 1 40 @ 1 45         |
| Black Russian.....            | 1 12 1/2 @ 1 25     |
| Red.....                      | 1 15 @ 1 32 1/2     |

## CORN.

Values have not changed materially during the week. There are no large supplies offering, either domestic or Eastern, neither could heavy quantities be placed at full current rates.

|                                      |                 |
|--------------------------------------|-----------------|
| Large White, good to choice.....     | 1 22 1/2 @ 1 25 |
| Large Yellow.....                    | 1 20 @ 1 22 1/2 |
| Small Yellow.....                    | 1 40 @ —        |
| Eastern, in bulk (carload lots)..... | 1 14 @ 1 17     |

## RYE.

Very little coming forward, and there is not much inquiry at present from either home or foreign buyers.

|                          |             |
|--------------------------|-------------|
| Good to choice, new..... | 87 1/2 @ 90 |
|--------------------------|-------------|

## BUCKWHEAT.

Market is a little better stocked with domestic than for a long time past, values ruling steady.

|                     |             |
|---------------------|-------------|
| Good to choice..... | 1 80 @ 1 90 |
|---------------------|-------------|

## BEANS.

The market is moderately firm, at current quotations, for most descriptions of beans, and especially so for choice to select white, either large or small, these being offered sparingly and give promise of continuing in sellers' favor throughout the season. Limas are being quite steadily held; spot stocks of same are of small volume. In colored beans there is not much doing, and for Pinks the market shows weakness, this variety being offered more freely than immediate demand warrants.

|                                  |             |
|----------------------------------|-------------|
| Pea, fair to good, 100 lbs.....  | 4 00 @ 4 25 |
| Small White, good to choice..... | 4 00 @ 4 15 |
| Lady Washington.....             | 3 00 @ 3 25 |
| Butter.....                      | 4 07 @ 4 50 |
| Pinks.....                       | 1 90 @ 2 10 |
| Bayos, good to choice.....       | 2 65 @ 2 80 |
| Reds.....                        | 3 00 @ 3 25 |
| Red Kidney.....                  | 4 00 @ 4 25 |
| Limas, good to choice.....       | 5 20 @ 5 30 |
| Black-eye Beans.....             | 3 00 @ 3 25 |
| Horse Beans.....                 | 1 75 @ 2 00 |
| Garbanzos, large.....            | 2 00 @ 2 25 |
| Garbanzos, small.....            | 1 25 @ 1 75 |

## DRIED PEAS.

Green Peas are scarce and market is decidedly firm. Tendency on Niles has been to slightly easier rates, demand for them being less urgent.

|                             |             |
|-----------------------------|-------------|
| Green Peas, California..... | 2 60 @ 2 75 |
| Niles Peas.....             | 2 25 @ —    |

## WOOL.

The local market has worn a holiday aspect most of the current week, largely due to influences from the Atlantic side, where trade was reported dull and always is Thanksgiving time, this holiday being made the occasion for a general suspension of business throughout New England, where most of the woolen mills are located. Prices remain quotably as before, and no fears are entertained here of values receding materially.

## SPRING.

|                             |         |
|-----------------------------|---------|
| Humboldt and Mendocino..... | 16 @ 17 |
| Northern, free.....         | 14 @ 15 |
| Northern, defective.....    | 12 @ 13 |
| Middle Counties, free.....  | 14 @ 15 |

|                                      |         |
|--------------------------------------|---------|
| Middle Counties, defective.....      | 11 @ 13 |
| Southern, 12 mos.....                | 8 @ 10  |
| Southern, free, 7 mos.....           | 9 @ 11  |
| Southern, defective, 7 mos.....      | 8 @ 9   |
| Oregon Valley, fine.....             | 17 @ 18 |
| Oregon Valley, coarse to medium..... | 16 @ 17 |
| Eastern Oregon, choice.....          | 13 @ 15 |
| Eastern Oregon, fair to good.....    | 10 @ 12 |
| Nevada, as to condition.....         | 11 @ 15 |

## FALL.

|                             |         |
|-----------------------------|---------|
| Humboldt and Mendocino..... | 11 @ 13 |
| Middle County.....          | 9 @ 10  |
| San Joaquin.....            | 7 @ 9   |
| San Joaquin Lambs.....      | 8 @ 9   |

## HOPS.

A quiet market is noted. Dealers continue to talk firmness, and in some instances will offer half a cent to a cent more than they were willing to pay a few weeks ago, but they are still unwilling to buy at prices in keeping with the quotations they are sending out, and which are based mainly on their own asking figures. Offerings from first hands are not heavy, particularly of desirable qualities.

|                               |             |
|-------------------------------|-------------|
| Good to choice 1900 crop..... | 13 1/2 @ 16 |
|-------------------------------|-------------|

## HAY AND STRAW.

The hay market has ruled fairly steady, more owing to very moderate arrivals than to any great demand, the inquiry not being particularly active. Stocks in this center have been considerably reduced during the past fortnight. Straw is being offered very sparingly.

|                    |              |
|--------------------|--------------|
| Wheat.....         | 9 00 @ 13 00 |
| Wheat and Oat..... | 9 00 @ 12 00 |
| Oat.....           | 8 00 @ 12 00 |
| Barley.....        | 7 00 @ 9 00  |
| Volunteer.....     | 6 00 @ 7 50  |
| Alfalfa.....       | 8 00 @ 9 50  |
| Stock.....         | 5 50 @ 7 00  |
| Compressed.....    | 9 00 @ 13 00 |
| Straw, 3 bale..... | 35 @ 45      |

## MILLSTUFFS.

Bran was not in heavy receipt, neither was it in brisk request at full current figures. Quotable rates remained at about same range as preceding week. Supplies of both Middlings and Shorts were very moderate, but sufficient for the immediate demand. Rolled Barley and Milled Corn were held at practically unchanged rates.

|                     |               |
|---------------------|---------------|
| Bran, 3 ton.....    | 13 50 @ 14 50 |
| Middlings.....      | 16 50 @ 19 00 |
| Shorts, Oregon..... | 14 00 @ 15 50 |
| Barley, Rolled..... | 16 00 @ 16 50 |
| Cornmeal.....       | 26 00 @ —     |
| Cracked Corn.....   | 27 00 @ —     |

## SEEDS.

Nothing of consequence doing in this line, offerings of most kinds being too light to admit of extensive or wholesale operations. There is both Utah and California Alfalfa Seed on market, but only moderate quantities of either.

|                          | Per cwt.      |
|--------------------------|---------------|
| Mustard, Trieste.....    | — @ —         |
| Mustard, Yellow.....     | — @ —         |
| Flax.....                | 2 00 @ 2 50   |
| Alfalfa, Utah.....       | 9 @ 9 1/2     |
| Alfalfa, California..... | 8 1/2 @ 8 3/4 |
| Canary.....              | 3 1/2 @ 4     |
| Rape.....                | 2 @ 3         |
| Hemp.....                | 3 1/2 @ 4     |

## BAGS AND BAGGING.

The Grain Bag market is showing a rather firm undertone, owing to the present good crop outlook and also to recent advances in the price of bag material. There is little doing, however, in bags of any description, this being invariably a quiet time in this department of trade.

|                                                 |               |
|-------------------------------------------------|---------------|
| Calcutta Grain Bags, buyer June-July.....       | 6 1/2 @ 6 1/2 |
| Calcutta Grain Bags, spot.....                  | 6 @ —         |
| San Francisco Grain Bags, 22x36, spot.....      | 5 1/2 @ 6     |
| State Prison Bags in lots of 2000, 3/4 100..... | — @ —         |
| Wool Sacks, 4 lbs.....                          | — @ 32 1/2    |
| Wool Sacks, 3 1/2 lbs.....                      | — @ 28 1/2    |
| Fleece Twine.....                               | 7 1/2 @ —     |
| Gunnies.....                                    | — @ 12 1/2    |
| Bean Bags.....                                  | 4 1/2 @ 5 1/2 |
| Fruit Sacks, cotton.....                        | 6 1/2 @ 7 1/2 |

## HIDES, PELTS AND TALLOW.

There is a moderate business doing in Hides and Pelts within range of unchanged quotations. Tallow is in fair request and is commanding steady figures.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

|                                     | Sound.            | Culls.  |
|-------------------------------------|-------------------|---------|
| Heavy Steers, over 56 lbs.....      | 10                | 9       |
| Medium Steers, 48 to 56 lbs.....    | 9                 | 8       |
| Light Steers, under 48 lbs.....     | 8 1/2             | 7 1/2   |
| Heavy Cow Hides, over 50 lbs.....   | 8 1/2             | 7 1/2   |
| Light Cow Hides, under 50 lbs.....  | 8 1/2             | 7 1/2   |
| Wet Salted Kip.....                 | 9                 | 8       |
| Wet Salted Veal.....                | 9                 | 8       |
| Wet Salted Calf.....                | 10                | 9       |
| Dry Hides.....                      | 16                | 13      |
| Dry Kip and Veal, 11 to 16 lbs..... | 15 @ 16 @ 13 @ 14 | 16 @ 13 |
| Dry Calf, under 4 lbs.....          | 16                | 13      |
| Salted Horse Hides, large.....      | 2 50 @ —          | — @ —   |
| Salted Horse Hides, medium.....     | 2 00 @ —          | — @ —   |
| Salted Horse Hides, small.....      | 1 00 @ —          | — @ —   |
| Dry Horse Hides, large.....         | 1 75 @ —          | — @ —   |
| Dry Horse Hides, small.....         | 1 00 @ 1 50       | — @ —   |
| Dry Colts' Hides.....               | 50 @ —            | — @ —   |
| Pelts, long wool, 3/4 skin.....     | 80 @ 1 00         | — @ —   |
| Pelts, medium, 3/4 skin.....        | 60 @ 85           | — @ —   |

|                                  |             |
|----------------------------------|-------------|
| Pelts, short wool, 3/4 skin..... | 30 @ 50     |
| Pelts, shearling, 3/4 skin.....  | 15 @ 25     |
| Deer Skins, best summer.....     | 27 1/2 @ 30 |
| Deer Skins, good medium.....     | 20 @ 22 1/2 |
| Deer Skins, thin winter.....     | — @ 10      |
| Elk Hides.....                   | 10 @ 12     |
| Tallow, good quality.....        | 4 @ —       |
| Tallow, No. 2.....               | 3 @ 3 1/2   |
| Goat Skins, perfect.....         | 30 @ 37 1/2 |
| Goat Skins, damaged.....         | 10 @ 20     |
| Kid Skins.....                   | 5 @ 10      |

## HONEY.

Stocks in this center are light of all descriptions, and there is nothing to warrant anticipating much coming forward during the balance of the season. Market shows firmness, more particularly for high grade, light colored and fine flavored honey.

|                              |                 |
|------------------------------|-----------------|
| Extracted, White Liquid..... | 7 1/2 @ 8       |
| Extracted, Light Amber.....  | 6 1/2 @ 7 1/2   |
| Extracted, Amber.....        | 6 1/2 @ 6 1/2   |
| White Comb, 1 lb frames..... | 13 @ 14         |
| Amber Comb.....              | 11 1/2 @ 12 1/2 |
| Dark Comb.....               | 8 @ 9           |

## BEESWAX.

There is no chance for much business in this article, stocks and offerings being of very slim proportions. Market is firm at current rates.

|                                    |         |
|------------------------------------|---------|
| Good to choice, light, 3/4 lb..... | 26 @ 28 |
| Dark.....                          | 24 @ 25 |

## LIVE STOCK AND MEATS.

Another advance is quoted on Beef, which is being well maintained. Mutton has been in good request and has been commanding, as a rule, advanced rates. Veal and Lamb were not offered freely and choice sold to good advantage. Hogs were in moderate receipt and good request at prevailing figures.

|                                               |               |
|-----------------------------------------------|---------------|
| Beef, first quality, dressed, net 3/4 lb..... | 7 @ 7 1/2     |
| Beef, second quality.....                     | 6 1/2 @ 7     |
| Beef, third quality.....                      | 6 @ 6 1/2     |
| Mutton—ewes, 7 1/2 @ 8c; wethers.....         | 8 @ 8 1/2     |
| Hogs, bard grain fed, medium.....             | 5 1/2 @ 5 1/2 |
| Hogs, small, fat.....                         | 5 1/2 @ 5 1/2 |
| Hogs, large, hard.....                        | 5 1/2 @ —     |
| Hogs, feeders.....                            | 5 @ 5 1/2     |
| Hogs, country dressed.....                    | 6 1/2 @ 7     |
| Veal, small, 3/4 lb.....                      | 8 @ 10        |
| Veal, large, 3/4 lb.....                      | 9 @ —         |
| Lamb, spring, 3/4 lb.....                     | 9 @ 9 1/2     |

## POULTRY.

The market was in generally improved condition for the producing and selling interest, receipts being rather light, and as is usual Thanksgiving week, the demand was good for choice fowls, Turkeys coming in for the largest share of attention. Sales of Dressed Turkeys on Thanksgiving account were mainly within range of 15 @ 18c, a few extra select commanding above latter figure. Aside from Turkeys, young chickens in fine condition were most in favor and sold to good advantage.

|                                     |             |
|-------------------------------------|-------------|
| Turkeys, live hens, 3/4 lb.....     | 15 @ —      |
| Turkeys, live gobblers, 3/4 lb..... | 14 @ 15     |
| Turkeys, Dressed, per lb.....       | 15 @ 18     |
| Hens, California, 3/4 dozen.....    | 3 50 @ 5 00 |
| Roosters, old.....                  | 3 50 @ 4 00 |
| Roosters, young (full-grown).....   | 4 50 @ 5 00 |
| Fryers.....                         | 4 00 @ 4 50 |
| Broilers, large.....                | 3 75 @ 4 00 |
| Broilers, small.....                | 3 00 @ 3 50 |
| Ducks, old, 3/4 dozen.....          | 3 00 @ 4 00 |
| Ducks, young, 3/4 dozen.....        | 4 00 @ 5 50 |
| Geese, 3/4 pair.....                | 1 75 @ 2 00 |
| Goslings, 3/4 pair.....             | 1 75 @ 2 00 |
| Pigeons, old, 3/4 dozen.....        | 1 00 @ —    |
| Pigeons, young.....                 | 1 50 @ 1 75 |

## BUTTER.

The improved condition noted in last review has been followed by still further hardening of values for desirable qualities, with market quite firm for strictly choice to select, this sort being in very limited stock and in good request. Seriously defective qualities continued to drag at much the same low range of prices as had been ruling.

|                                           |                 |
|-------------------------------------------|-----------------|
| Creamery, extras, 3/4 lb.....             | 25 @ —          |
| Creamery, firsts.....                     | 23 @ 24         |
| Creamery, seconds.....                    | 22 @ 23         |
| Dairy, select.....                        | 22 1/2 @ 23 1/2 |
| Dairy, seconds.....                       | 19 @ 21         |
| Dairy, soft and weedy.....                | — @ —           |
| Mixed store.....                          | 16 @ 17         |
| Creamery in tubs.....                     | 20 @ 22         |
| Pickled Roll.....                         | 20 @ 21         |
| Firkin, California, choice to select..... | 20 @ 21         |
| Firkin, common to fair.....               | 17 @ 18         |

## CHEESE.

Values are being well maintained for all descriptions at rates quoted, with market especially firm for mild-flavored new of high grade, such being in light stock, with some sales in a small way of favorite marks at an advance on quotable rates.

|                                   |             |
|-----------------------------------|-------------|
| California, fancy flat, new.....  | 11 @ 12     |
| California, good to choice.....   | 10 @ 11     |
| California, fair to good.....     | 9 1/2 @ 10  |
| California Cheddar.....           | — @ —       |
| California, "Young Americas"..... | 10 @ 12 1/2 |

## EGGS.

The market is showing better condition than a fortnight ago was thought possible for this date. The recent storm checked receipts of domestic product, and comparatively stiff prices East caused imported to arrive much more sparingly



than for some time previous. Sales of very select fresh were made in a small way up to 41c, with the bulk of the business in good to choice eggs within range of 32½@37½c.

California, select, large, white and fresh. 37½@40  
California, select, irregular color & size. 32½@35  
California, good to choice store. 27½@30  
Eastern, as to section and grading. 25 @ 30  
Eastern, cold storage. — @ —

#### VEGETABLES.

Market was lightly stocked with most descriptions now in season, and for desirable qualities firm figures were as a rule realized. Choice Onions were in very light supply. Peas, String Beans and other fresh vegetables on market were mainly from Los Angeles section.

Beans, String, # lb. 4 @ 7  
Beans, Wax, # lb. 6 @ 8  
Beans, Lima, # lb. 5 @ 7  
Cabbage, choice garden, # 100 lbs. 1 00 @ 1 25  
Cauliflower, # dozen 50 @ —  
Cucumbers, Bay, # box. 50 @ 75  
Egg Plant, # lb. 7½ @ 10  
Garlic, # lb. 4½ @ 5  
Onions, Yellow Danver, # cental. 1 35 @ 1 50  
Peas, Sweet, garden, # lb. 4 @ 6  
Peppers, Green Chile, # box. 35 @ 60  
Tomatoes, River, # large box. 75 @ 1 50

#### POTATOES.

Much the same conditions prevailed in the potato trade as during preceding week. For best qualities the market was moderately firm without being quotably higher. Offerings of choice to select were not heavy and demand was fair. Common stock continued to be offered rather freely, and at low figures, meeting with slow sale. Sweeters were in fair supply, and \$1 per cental was an extreme quotable figure for carload lots.

Burbanks, River, # cental. 30 @ 60  
Burbanks, Petaluma-Tomales. 35 @ 60  
Burbanks, Salinas, # cental. 90 @ 1 25  
Burbanks, Oregon, # cental. 55 @ 90  
Sweet Potatoes, Yellow, # cental. 50 @ 1 00

#### The Fruit Market.

#### FRESH FRUITS.

Apples made a very fair display this week, and choice to select were more in evidence than at any previous date this season. Demand for best qualities was good, but common grades dragged at the same low figures before noted. Select Oregon Spitzenberg brought \$1.50 per box, but of other apples sales above \$1.25 were the exception, and the quality had to be fine to command this price. Pears were in limited supply and best Winter Nells brought tolerably good figures, but for other kinds the market could not be termed firm. Grapes are still offering in a small way, and a few showing excellent quality for this late date are bringing comparatively stiff prices. Persimmons showing prime condition sold fairly well, but demand for them was not brisk. Strawberries did not arrive freely, and, all things considered, brought fair figures; as was to be expected, on account of the recent storm, the quality did not average high.

Apples, fancy, 4-tier box. 1 25 @ 1 50  
Apples, good to choice, # 50-lb box. 65 @ 1 00  
Apples, common to fair, # 50-lb box. 25 @ 50  
Grapes, Tokay, # box. 65 @ 1 25  
Grapes, Black, # box. 65 @ 1 25  
Grapes, Muscat, # box. — @ —  
Raspberries, # chest. 6 00 @ 7 00  
Pears, Winter Nells, # box. 60 @ 1 25  
Pears, common kinds, # box. 30 @ 75  
Persimmons, # box. 75 @ 1 00  
Quinces, # box. 40 @ 75  
Strawberries, Longworth, # chest. — @ —  
Strawberries, Large, # chest. 4 00 @ 6 50  
Whortleberries, # lb. — @ —

#### DRIED FRUITS.

The market for cured and evaporated fruits has developed nothing of importance since date of last review. The entire line is quiet. Packers and jobbers claim that in many years there has not been a November quite so dull as the present one. That December will be accompanied by any special improvement in trade is not expected. Not until the new year is fairly under way is there likely to be any special renewal of trade in this line. Stock-taking time will soon be at hand, and during this period dealers naturally aim to have as light supplies as possible. There is nothing to warrant making any special changes in quotations, but owing to the existing dullness, values are for the time being largely nominal. Under selling pressure these figures could not be realized. Santa Clara valley Prunes are all under Association control, but there are moderate quantities from outside districts still offering at irregular figures.

#### EVAPORATED OR BLEACHED.

Apricots, Royal, prime. 6¼ @ 7  
Apricots, Royal, choice, in sacks, # lb. 7¼ @ 8  
Apricots, Royal, fancy. 9 @ —  
Apricots, Moorpark. 9¼ @ 11¼  
Apples, in 50-lb boxes, rings, pressed, fancy. 5¼ @ 5½  
Apples, 50-lb boxes, rings, pressed, good to choice. 3¼ @ 4½  
Figs, White, fancy pressed. 6 @ 7

Nectarines, # lb. 4 @ 6  
Peaches, unpeeled, fancy. 6 @ 6¼  
Peaches, unpeeled, choice. 5 @ 5¼  
Peaches, peeled, in boxes. 11 @ 14  
Pears, unpeeled Bartlett, halved, fancy. 5 @ 6  
Pears, halved, unpeeled Bartlett. 3½ @ 4½  
Pears, quartered, unpeeled Bartlett. 3½ @ 4½  
Plums, Black, pitted. 4 @ 5  
Plums, White and Red. 5 @ 6  
Prunes, Silver. 4½ @ 6

#### COMMON SUN-DRIED.

Apples, sliced. 2 @ 3  
Apples, quartered. 2 @ 3  
Figs, Black. 1½ @ 2½  
Figs, White. 2½ @ 3½  
Peaches, unpeeled. 4 @ 5

Prices for new crop Prunes, as named by the California Cured Fruit Association: Santa Clara, four sizes, 3c. per lb.; 40-50s, 7c.; 50-60s, 5½c.; 60-70s, 3½c.; 70-80s, 3¼c.; 80-90s, 2½c.; 90-100s, 2¼c.; 100-120s, 2c., which is the uniform price for this grade; Sonomas, other than smallest, ¼c. less; other districts, ¼c. less, except for smallest; Ruby, ¼c. premium.

#### RAISINS.

There is very little movement at present in offerings from first hands. Most of the dealers throughout the country appear to have sufficient supplies to carry them through the holidays, and are consequently not inclined to do any further purchasing until after the opening of the new year. Values are without quotable change, and for standard Association goods are being well maintained.

#### F. O. B. FRESNO DELIVERY.—CARLOAD LOTS.

Imperial Clusters, 6-crown, # 20-lb box. 3 00 @ —  
Dehesa Clusters, 5-crown. 2 50 @ —  
Fancy Clusters, 4-crown. 2 00 @ —  
London Layers, 3-crown, # box. 1 60 @ —  
do do 2-crown, # box. 1 50 @ —  
(Usual advance for fractions.)

Loose Muscatel, 4-crown standard, # lb. — @ 7  
Loose Muscatel, 3-crown. — @ 6½  
Loose Muscatel, 2-crown standard. — @ 6  
Loose Muscatel, seedless. — @ 6¼  
(Above prices for loose raisins are for 50-lb boxes.)

Thompson Seedless.—Bleached fancy, # lb., 12c; choice, 11c; standard, 10c; prime, 9c. Unbleached 9c.

Sultanas.—Bleached fancy, # lb., 10½c; choice, 9½c; standard, 8½c; prime, 8c. Unbleached, 8c.

#### CITRUS FRUITS.

Oranges were in increased receipt, a liberal proportion of the week's arrivals being from Oroville district. For highly colored and ripe Navels there was a fair demand, such stock being quotable at \$3 per box, but there was not much of this sort offering. Green Oranges were obtainable at low prices and received little attention. Lemon market was quiet at generally unchanged rates, with supplies more than ample for immediate requirements. Limes ruled as favorably to buyers as last noted.

Oranges—Navel, # box. 1 50 @ 3 00  
Valencia, # box. — @ —  
Seedlings, # box. 1 00 @ 2 00  
Tangerines, # box. 1 00 @ 2 00  
Grape Fruit, # box. 2 00 @ 3 50  
Lemons—California, select, # box. 2 25 @ 2 50  
California, good to choice. 1 50 @ 2 00  
California, common to fair. 50 @ 1 00  
Limes—Mexican, # box. 4 00 @ 4 50  
California, small box. 50 @ 75

#### NUTS.

There are not many Almonds offering from first hands, and there is very little inquiry at present; asking rates are unchanged. The market for No. 1 Walnuts is steady at figures lately current, with a fair jobbing trade in progress. Off grade Walnuts are meeting with a weak market, and supplies of this description are tolerably heavy.

California Almonds, shelled. 24 @ 27  
California Almonds, paper shell, # lb. 13 @ 15  
California Almonds, soft shell. 10½ @ 12½  
California Almonds, hard shell. 6 @ 7  
Walnuts, White, soft shell. 8½ @ 10½  
Walnuts, White, California, standard. 7½ @ 10  
Chestnuts, California Italian. 10 @ 12  
Peanuts, California, fair to prime. 4 @ 5  
Peanuts, Eastern, hand-picked. 5½ @ 6  
Pine Nuts. 5 @ 6

#### WINE.

The market for new wines remains in all essential respects the same as last noted, California dry wines of current year's vintages being quotable at 14@18c per gallon, as to quality and section, with most of the business in offerings from first hands within range of 14@16c. The Wine Dealers' Association is reported selling in small quantities three-year-old dry wine at 17½c per gallon, which would seem to indicate weakness, but nothing is said about the quality. There is new wine, however, very select Northern, which is not obtainable at 17½c, and which would readily command this figure.

#### California Dried Fruit at New York.

NEW YORK, Nov. 27.—Evaporated apples, common, 3@4c; prime wire tray, 4½@5¼c; choice, 5¼@6c; fancy, 6@6¼c.

California Dried Fruits.—The dullness customary to the holiday period is being experienced. Prunes, 3¼@8¼c.

Apricots, Royal, 11@14c; Moorpark, 15@17c. Peaches, unpeeled, 6@9c; peeled, 16@20c.

#### Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

| FOR THE WEEK.           | Since July 1, 1900. | Same time last year. |
|-------------------------|---------------------|----------------------|
| Flour, # sacks. 139,299 | 2,539,824           | 2,234,484            |
| Wheat, centals. 23,025  | 2,317,974           | 1,738,906            |
| Barley, centals. 20,505 | 2,180,182           | 3,280,488            |
| Oats, centals. 3,705    | 416,386             | 428,446              |
| Corn, centals. 4,890    | 44,990              | 51,595               |
| Rye, centals. 240       | 92,162              | 76,617               |
| Beans, sacks. 11,216    | 404,089             | 253,366              |
| Potatoes, sacks. 23,970 | 658,300             | 532,963              |
| Onions, sacks. 3,435    | 110,686             | 97,082               |
| Hay, tons. 2,395        | 84,789              | 82,585               |
| Wool, bales. 1,074      | 19,659              | 33,298               |
| Hops, bales. 202        | 5,380               | 6,171                |

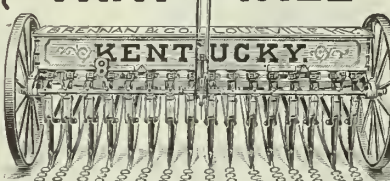
#### EXPORTS BY SEA.

| FOR THE WEEK.             | Since July 1, 1900. | Same time last year. |
|---------------------------|---------------------|----------------------|
| Flour, # sacks. 56,480    | 1,337,704           | 1,271,747            |
| Wheat, centals. 14,158    | 2,133,352           | 1,413,320            |
| Barley, centals. 53,752   | 1,369,219           | 2,508,008            |
| Oats, centals. —          | 46,554              | 23,342               |
| Corn, centals. 248        | 722                 | 7,099                |
| Beans, sacks. 188         | 6,647               | 9,801                |
| Hay, bales. 11            | 77,984              | 47,144               |
| Wool, pounds. —           | 233,621             | 2,891,189            |
| Hops, pounds. 33,441      | 343,163             | 443,377              |
| Honey, cases. 13          | 1,570               | 2,749                |
| Potatoes, packages. 4,732 | 43,545              | 32,035               |

#### The Betteravia Sugar Factory.

The Union Sugar Company's factory at Betteravia has about finished a two months' run. This is shorter than last year's run, but, if reports may be credited, will be more than doubled next year. The building is planned to accommodate a 1000-ton plant, but only half that capacity of machinery was installed. Within the next few months the other half of the plant will be established. It is also reported that the company has purchased outright the Harris ranch at Los Alamos, containing 6000 acres, leased large tracts on the Oso Flaco, near Black lake, and 300 acres of the Jesus Maria tract, all to be planted to beets the coming season. At present the mill is consuming about 350 tons of beets per day and turning out 1500 sacks of sugar, worth at wholesale about \$6.30 per sack. In the factory 160 men are employed. Over 100 more are working the ranch, plowing and hauling beets and irrigating. For pulling and topping, 250 Japanese and 75 Chinamen are employed. The company owns about 150 head of mules and horses, which they are now working, and have recently bought 200 head of unbroken horses, which they intend to break before the first of the year.—San Luis Obispo Tribune.

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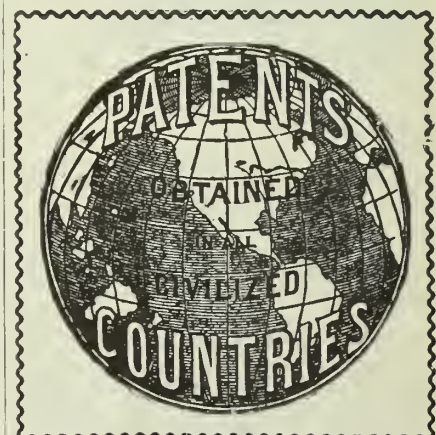
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# PATENTS



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## THE GARDEN.

### The Loquat.

By C. P. TAFT at the Farmers' Institute at Orange.

The loquat is a member of the rose family, and so is more or less distantly related to our common plums, peaches, strawberries, Logan berries and roses, and more nearly related to the hawthorne, junberry, apple, pear and quince. It unites by grafting or budding very well with the last three, especially the quince, and I presume that it might make at least temporary union with some of the other members of the family if it were thought worth while to try the experiment. It is usually budded on its own root. The generic name of the loquat is *Photinia*, or shining, from the glossy leaves. The specific name is *Japonica*, it having been introduced first from Japan, but it is not peculiar to that country, being grown also in China, India and southern Europe. The name loquat is, I think, Chinese, and means strange acting or crazy fruit, probably because it reverses the usual order of things by blossoming from August to December, and maturing fruit from February to June. Most loquat trees are seedlings, as at present grown, and vary in taste from bitter and worthless to very sweet, with marked flavor. They range from nearly white to yellow, and salmon-colored flesh, and, like apples and pears, they differ greatly in shape. There is much room here for scientific hybridizing with unusually good promise of obtaining very desirable results. It takes about five years to mature a tree from the seed, however, so as to test the fruit.

**NEW NOTICE FOR THE LOQUAT.**—It is only of late years that the loquat has attracted any attention as a market fruit, partly because of the introduction of a new and superior variety, and partly, particularly the past year, because of its use on a large scale for jelly. A Los Angeles fruit preserving firm (Bishop & Co.), who make a specialty of fruit products not grown in others portions of the United States, used several tons of loquats for jelly the past year, and expect each year to use an increased amount. This I have from W. T. Bishop direct. From another source I learn that in order to introduce their goods this firm put up a large number of small cans of various kinds of jelly which they sold to the Pullman Co. for the use of their patrons in the dining cars. As a result there was an increased demand for that class of jellies, and the loquat stood second in popularity, the first being Logan berry. This firm is the only one I know of which has thus far used the loquat in large quantities, but there will doubtless soon be others, as soon as the fruit is raised in sufficient quantities, who will undertake to supply the growing demand. Indications in that direction were not wanting last season.

**AS A TABLE FRUIT.**—It is not as a jelly fruit, however, that the loquat is the most profitable. That merely offers an outlet for seedlings and other small ones. I doubt if there is any other

table fruit whose popularity has increased as rapidly within the past few years. This is owing to the introduction of a variety called the Advance, which is very large, measuring often from 2½ to 3 inches in length, is pear-shaped, grows in immense clusters and is very sweet and of fine flavor. The following is by the horticultural editor of the Los Angeles Times of April 6, 1900:

The loquat, or Japanese medlar, has been improved by an Orange county fruit grower. The new variety is called the Advance, and after sampling this new fruit I can say that it is entirely superior to anything yet seen of that kind. I do not recall the name of the originator of the improved loquat, but I will assure the Times readers the fruit is worth having. There is not a trace of the peculiar or disagreeable flavor so conspicuous in the common variety. It originated from an extra good tree from which other trees have been propagated by budding. The fruit is in some specimens a perfect pear in shape, resembling a miniature Bartlett in form, the skin a beautiful clean lemon color, the flesh translucent and delicious. If any one is hunting something of the delightful in now fruit varieties he will find it in this new loquat. I speak conservatively in stating that it is one of the finest novelties that has yet been produced on the coast.

Again, on April 16, the following was among the Santa Ana brevités in the Times:

C. P. Taft of Orange has sent an exhibit of Advance loquats to the Chamber of Commerce in Los Angeles, which are, perhaps, the largest and finest specimens ever seen in that city. Some of them measured 5½ inches in circumference, and almost 3 inches in length. The loquat is a variety of fruit that heretofore has received but little attention in southern California, but which the past few years has proved quite a profitable fruit to raise. It is rapidly coming into high favor in the making of jolly and jam.

On the 26th of April, after mentioning the desirability of working over old trees to the Advance, the horticultural editor of the Times again writes:

It is not the usual thing for newspapers to advertise fruit trees gratuitously, but one cannot discuss the merits of a new fruit without it. And then, the originator of a new variety of fruit has no protection from the patent laws, as his production is not patentable, though often more meritorious than patentable articles. And thus we give the new originations in fruits all the help we can, first proving them to be worthy of propagation. We have not the address of the originator of the Advance loquat, but Wiggins has. Every yard should have one.

All this from the Times is entirely unsolicited. I do not know the editor, nor where he found the fruit he speaks of, though perhaps it was at the Chamber of Commerce.

**PROMINENCE ABROAD.**—Prof. Wickson, in the recent edition of his most excellent work on California Fruits, writes as follows:

Recently a very marked improvement in loquats has been achieved by C. P. Taft of Orange. Mr. Taft's work has demonstrated that this fruit is susceptible of improvement in size, flavor, appearance, in bearing habit of tree and in direction of early and late varieties, and in all these directions not only in the line of better fruit, but fruit which commands in the market several times the value of the common types.

As a result of the above by Prof. Wickson, the Agricultural Department at Washington sent to me the past season for samples of the best varieties to copy by painting and modeling in wax. After receiving the fruit which they said arrived in excellent condition, they wrote that they did not suppose that there were such fine

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loquats in the United States. I shipped some also to St. Leo, Florida, and there they attracted attention as superior to anything grown in that State.

**A COMING FRUIT.**—Finally, but not by any means of the least importance, is the following statement by a firm of Los Angeles (Messrs. Ludwig & Mathews), who handled much of my fruit the past season. It shows what the public thought of the Advance loquat and the firm's opinion of its future. They write as follows:

The contrast between the loquats of several years ago and the rich, highly flavored, luscious fruit that you sent us last spring is certainly great. It was really a delightful experience to watch visitors taste your fruit at our store for the first time, and to listen to their joyful expressions to note how interested they immediately became in it.

We have great hopes of the loquat becoming a staple article and are confident that the demand for it will increase very rapidly; especially if you can produce such delicious fruit every year as you did this. At present the field is somewhat limited, but it is fast widening; wherever we have introduced it, it has found admirers. We are not prophets, but will venture to predict that this fruit will be known all over the country in a few years.

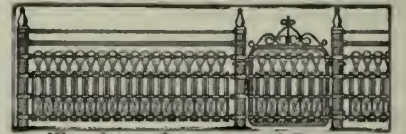
Several previous papers which I have written were necessarily devoted mainly to my own opinion and experience. This time I am glad to present such excellent testimonials corroborative of what I have always maintained, that the loquat is quite worthy of being cultivated commercially by southern California fruit growers who are in favorable locations. It may seem to some that if the loquat were really such a good thing I would keep it to myself. Apart from the ethical view of so doing, I think that the greatest profits will eventually come from fruit shipped to eastern cities, and to do this requires a larger acreage than I can devote to the industry myself. At present the production is not keeping pace with the local demand, though there will doubtless be an increased planting this coming year, especially if it proves a wet one.

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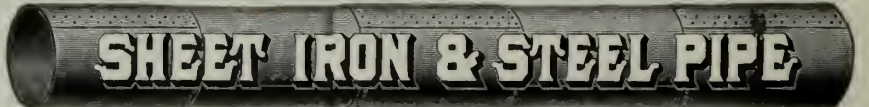
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### List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
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FOR PACIFIC COAST.

FOR WEEK ENDING NOV. 13, 1900.

- 661,483.—PROTRACTOR—J. D. Barrie, Los Angeles, Cal.  
661,595.—SWIMMING APPARATUS—J. S. Bartholomew, Guerneville, Cal.  
661,842.—CONVEYOR — H. W. Blaisdel, Yuma, A. T.  
661,863.—ROLLER BEARING—J. S. Godfrey, Harrington, Wash.  
661,724.—AIR DRAFT PROPELLER—Newmarker Bros., Reno, Nev.  
661,919.—CHIMNEY TOP—J. Newmarker, Reno, Nev.  
661,891.—TREE PROP—E. K. Parker, Pomona, Cal.  
661,726.—WASHING MACHINE—T. J. Pickett, S. F.  
661,774.—SHOVEL—Sheehy & O'Neill, S. F.  
661,941.—CAR COUPLING—Sullivan & Mahoney, Los Angeles, Cal.  
661,834.—TRUCK—G. M. Williams, Santa Rosa, Cal.  
33,544.—DESIGN—Brewer & Burfiend, S. F.

### Notices of Recent Patents.

Among the patents recently obtained through Dewey, Strong & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

**GATE.**—No. 660,807. Oct. 30, 1900. Henry Alten, Sebastopol, Cal. This invention relates to improvements in gates such as are used upon farms. It consists of a hinged gate adapted to swing so as to stand transversely across the road which is to be closed, or by swinging to one side to stand parallel with the roadway and leave a free passage, and in combination with such gate, a mechanism by which the gate may be unlatched by a person approaching from either side, and mechanism by which the gate is caused to swing to either open or close. In conjunction with this is a latching device by which the gate is retained in either its open or closed position. These movements are all produced by a vertically disposed fulcrumed lever which acts to raise the latch, tilt the gate and cause it to swing. Connections are made between this lever and other levers located at the side of the road, and at a sufficient distance from the gate so that the approaching passenger can operate the levers and open it.

**WEATHER STRIPS FOR DOORS OR WINDOWS.**—No. 660,839. Oct. 30, 1900. J. E. Bundy, San Francisco, Cal. This invention relates to a device for hermetically closing the bottoms of doors, windows or the like against the entrance of wind, rain and snow. It consists of a movable tilting strip forming a continuation of the threshold or seat over which the door normally closes and so guided that when the door is closed the inner edge of the strip will be tilted upwardly against the lower edge of the door and form a joint with a molding of suitable character which fits across the lower part of the door for that purpose. When the door is opened this piece falls by gravitation to its normal position where it forms a part of the threshold.

**WASHING MACHINE.**—No. 661,726. Nov. 13, 1900. T. J. Pickett, San Francisco, Cal. This invention relates to a machine for washing clothes. It consists in the combination of a tub with a convex faced plate therein having a stem. A transverse handle bar is centrally pivoted to said stem. There is a pressure platform adapted to bear the weight of the operator and connections at the ends of the handle bar, and other connections at the sides of the platform; ropes engage these connections and there are means on the handle bar for the attachment of the end of the ropes whereby the platform is adjusted with relation to the handle bar.

**FRUIT PACKING FORM.**—No. 660,362. Oct. 23, 1900. S. L. Casella, Alma, Cal. This invention is designed to provide an apparatus for rapidly filling baskets or packages with fruit, such as grapes, berries, etc., which are ordinarily packed

into small veneer baskets. The apparatus consists of a rectangular frame having elastic metallic plates fixed and projecting outwardly in one direction, and these frames are approximately the shape of a basket which is to be filled. Between the plates is fitted a slidable block which may be moved to the top or bottom, with means for holding it in position. The frame is fulcrumed in a yoke, which yoke is fixed to the table or bench where the work is to be done, and the frame is turnable to reverse it, with suitable locking devices for either position. The frame being turned so that the plates project upwardly, the block or plate within the space enclosed by the plates drops to the lower side, and is there supported while the space between the plates is filled with the fruit. The basket is then inverted over these plates, and the device being reversed the basket is withdrawn and the movable plate acts as a follower to press the fruit into the basket as it is removed.

**ALMOND HULLER AND SEPARATOR.**—No. 659,801. Oct. 16, 1900. Walter G. Read, Colusa, Cal. This invention relates to an apparatus for removing the hulls from almonds and separating the hulled nuts from the unhulled nuts, hulls, leaves, sticks, etc., delivering the cleaned hulled nuts into a receptacle, the unhulled nuts into another receptacle, and the separated hulls, leaves, sticks etc., into still another receptacle. It consists of a cylinder or drum, a longitudinally journaled rotary shaft extending therethrough, means for delivering the unhulled almonds into the drum, beater arms fixed upon the shaft within the drum, with radial braces or arms in the receiving ends of the drum having their outer ends twisted or turned to present their edges towards the nuts so that the latter will pass readily through the drum. From this drum they are delivered upon a suspended shoe which has means for oscillating it, and a peculiarly constructed wire screen surface which allows the hulls to pass through while retaining the almonds thereon. Other screens and chutes are employed upon which the separated materials are received, and means for delivering them to their proper receptacles.

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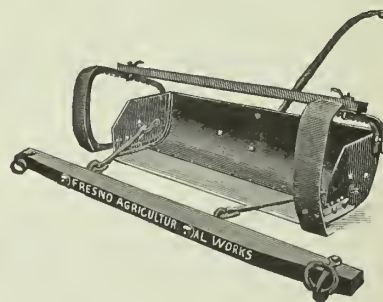
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## Patrons of Husbandry.

### Stockton Grange Resolves.

To THE EDITOR:—At the meeting of Stockton Grange, No. 70, P. of H., the following resolutions were passed:

To the Hon. S. D. Woods, Second Congressional District:—We respectfully petition you to urge the immediate building of the Nicaragua Canal as a relief from high shipping and railroad rates for the Pacific coast.

Resolved, That you urgently set forth the needs of California grain and fruit growers for shorter and cheaper transportation, while the Bill is before the House, as a great public need and a protection in time of war, and while its enemies are centered against it.

Resolved, That Stockton Grange, No. 70, P. of H., earnestly petitions Congress to make the Calaveras Big Trees Grove a national park, and thereby save to the United States the greatest sequoias in the world.

M. T. Root, Secretary.  
Stockton, Nov. 24.

### Forestry Work.

The field work of the Division of Forestry of the Department of Agriculture, which has been carried on in many parts of the country by parties of different sizes since last May, has now been largely completed for 1900. This summer's work was carried on in New York, Tennessee, Missouri, Colorado, South Dakota, Arkansas, Arizona, Washington, Oregon, California, a number of tree-planting States of the Middle West and, in a small way, in other States besides. Much new and valuable information has been collected, and a very large number of surveys have been made, of the results of which it will soon be possible to make practical use.

The work which has thus been going on in the field consisted of making forest surveys and of gathering measurements and information about growth, stand, reproduction, etc. Much of it is preparatory to the preparation of what are called "working plans," or plans for the management and utilization of given tracts of timber. These are based not on any general rules, but on a thorough knowledge of the peculiarities of the forest on each tract, of the market and transportation facilities of the regions in which they are situated and of the financial necessities of each case. The rest of the work of the field parties has been more of the character of investigations, as, for instance, the examination of the influence of forest cover on water flow which was made on the watershed of the Arrowhead river in southern California, the studies of the habits of growth and reproduction of the two most important lumber trees of the Pacific coast—the red fir and the redwood—and the survey of the results of tree-planting undertakings which have been carried on in the northern part of the Mississippi valley.

During the coming winter the agents of the Division will spend most of their time in working up the results of the summer's surveys and in preparing reports on them, although there will doubtless be some field work as well.

### Grading Peanuts.

C. E. Utt of Tustin has a peanut grader in operation at the Tustin water works. It is the first machine introduced in California, although it has been in use in peanut centers of the East for some time. The peanuts are first passed into the hopper and then to the polisher, from which they emerge thoroughly cleaned and brightened. From here they go to the fan or grader, where they are graded into two grades. By passing through the separator all the "pops," or bad nuts, are thrown out, so that none but full nuts are passed into the sacks. The "pops," however, are not an entire loss, as they are finally used in the kitchen stove. The plant runs through from fifty to seventy-five sacks per hour. Mr. Utt has already shipped six carloads, or about ninety tons, to San Francisco.

### A Question for the Legislature.

To THE EDITOR:—We have had trouble with our High School for several years past, the cause being the local tax levied to keep it up. I have determined to try to induce our Legislature to give us State aid. The following is an appeal to that end which I wish to send to each of our Senators and Representatives:

"There being a chasm between our Grammar Schools and the State University which has to be filled in order to enable our young people to acquire an education in keeping with true Americanism, and the High School Law having been passed in order to fill that chasm, the people think that the State should make provision for paying instructors in the High Schools and thereby complete a California educational system."

If this meets with your approbation, please assist me as you think best.

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## A Peculiar Deal in Live Stock.

A transaction in sheep was adjudicated before Judge Hall lately. It was a transaction that had run the gamut of the code from a felony charge and insolvency proceedings to the present determination in a civil suit. The defendant in the case was a "last resort"; in the other proceedings another man was the defendant. Various terms have been applied to the transaction that led to the several proceedings, but as all the parties are well known and have been prominent in business circles, the matter has been talked of only privately among friends.

Philip Kolb is a wealthy business man of Pleasanton. He not only has a large mercantile establishment, but is interested in a number of other enterprises as silent partner. He is a prominent figure in this affair. On May 31, 1897, Owen Lafferty and P. Laustatat, two well known dealers in live stock, were out on a buying ex-

pedition. Down on Antonio Silva Nunes' ranch they found a band of 640 sheep that Laustatat wanted. The two dealers had previously been over to Flannigan's place to see sheep that Lafferty had some idea of purchasing, and then drove around to Nunes' on Laustatat's deal, in which Lafferty claims he was not interested. They met Nunes at Sunol and closed the bargain for the sheep all except the payment of the money. Nunes did not know Laustatat and, therefore would not accept his check for the amount, \$1256. So Lafferty took Laustatat over to Kolb and introduced him. After some conversation, it is alleged, Laustatat induced Kolb to go in on the deal and offered one-third of the profits if he would only arrange for the payment for the purchase price. This was easily fixed. Kolb had only to give his check to Nunes for the amount and Laustatat would give Kolb his check on the First National Bank of Oakland for \$1296. Kolb did that and he holds Laustatat's check as a souvenir of the deal, for it was returned from the bank with the usual indorsement in such cases made and provided. Nunes got his money, Laustatat the sheep and Kolb an experience dividend.

A complaint was filed against Laustatat, but it was ascertained that he did have about \$600 in the bank at the time the check was issued and the matter was dropped. Then Kolb brought a civil suit, but Laustatat went through insolvency and Kolb was shut out again. Then he brought suit against Lafferty, as a partner in the deal. A demand had previously been made on Lafferty, but he denied being interested in the proposition at issue, but had been in on the Flannigan deal. If it had been completed he was to have 20% of the profits. In court Kolb established a partnership relation between Lafferty and Laustatat, to the extent that he obtained a judgment against Lafferty for the amount of his claim and interest from May 31, 1897. The affair has been a cause celebre around Pleasanton, and many of the ranchers in that vicinity were interested spectators of the proceedings.

## The Coyote Question.

A Covelo correspondent of the Ukiah Dispatch says the coyote question is worrying the people of Mendocino county at present—in fact, has assumed huge proportions. Three years ago the grand jury in its report advised the repeal of the scalp law, and gave as a reason the fact that the county during the year that had just passed had paid out \$1440. This amount represented the destruction of 240 of these marauders, and if the county ever paid out that amount of money to better advantage it is difficult to tell how, when and where. During the last two years there has been about \$20,000 worth of hogs driven out of this valley, and it is generally supposed on the outside that they were raised in Round valley. They were raised within a radius of 20 or 25 miles of the valley and bought up by the farmers and put into the grain fields and fattened. There are a great many people living in the mountains who depend mostly on raising hogs for a living. Coyotes have become no numerous that their occupation is about gone. If something is not done soon, some of our dinner pails will be empty. The sheep men are suffering badly, too, but they can protect their property better than the hog men. It seems that there should be no opposition to a scalp law by any business man in this section, for they are all directly interested in the welfare of the people.

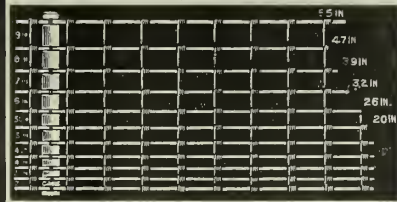


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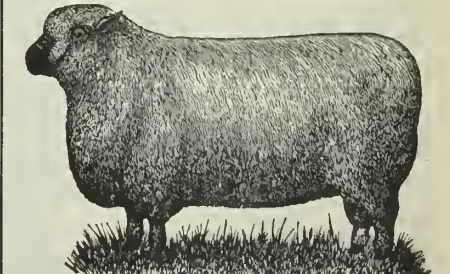
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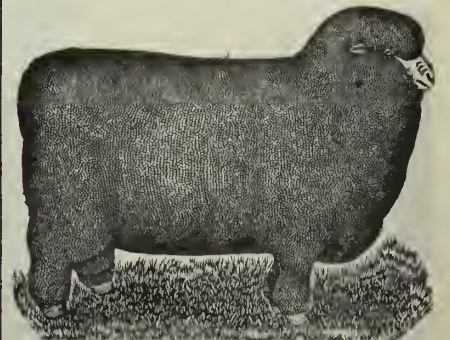


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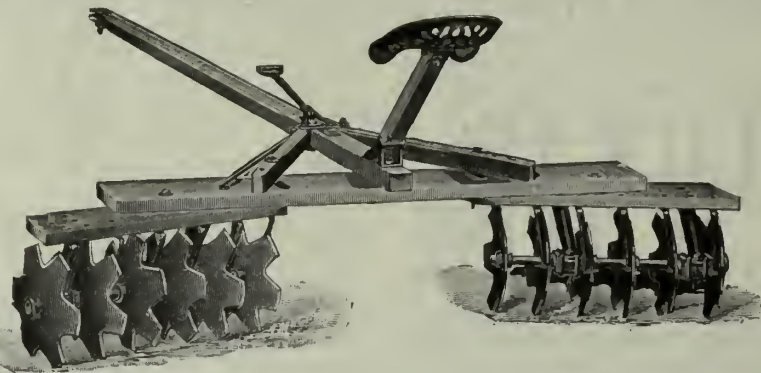
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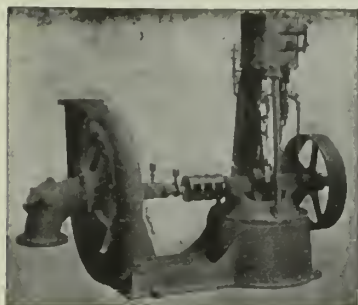
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# THE PACIFIC RURAL PRESS

AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 23.

SAN FRANCISCO, SATURDAY, DECEMBER 8, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

## Irrigation by the Furrow System.

In the PACIFIC RURAL PRESS last week there was a very interesting account of the deep rooting of California fruit trees and a clear statement of the ill effects of too shallow application of water. This matter has been uppermost in southern California horticultural discussion for the last year or two, and we have already given considerable attention to it. We cannot perhaps more forcibly remind readers of the facts than by presentation of the two excellent pictures, which we take from B. M. Lelong's last report on citrus culture, showing the furrow method of distributing water in bearing orchard and the way which is now being more or less widely practiced to enable the moisture to reach the lower levels of the subsoil. The lower picture shows the furrow system with the top soil mellow and permeable, and the owner of an orchard thus well kept is sometimes surprised to find that there lies beneath this elegant surface a compacted layer which arrests the percolation of water.

Such discoveries as this have led many southern growers to resort to new practices to enable the

tree to get the benefit of the water. The prevailing method is to secure a subsoil plow, which consists of a wedge-shaped foot attached to a slim standard rising to the ordinary plow beam. The standard opposes its thin edge to the soil so as to cleave it with the least difficulty, and the foot, passing through or beneath the hardpan, lifts and breaks it. This operation in the hard layer, and cutting the tree roots which are encountered, calls for much horse power, as the upper picture shows. The result of the subsoiling is to open a way for the water to sink and spread below the hardpan. It is usual to run this plow once through the center of the interspace between the rows of trees, at right angles to the irrigation furrows. After this is done the water is admitted to the furrows as usual; but, instead of flowing along smoothly, the water drops into the track of the subsoiler and runs there a long time before rising again to continue its course down the furrow. It is the experience of some

growers that the water has taken five or six days to reach the bottom of the furrows—a distance which would have been covered in twenty-four hours if the subsoiler had not intervened. This means much water for the subsoil and a notable invigoration of trees which have been famishing.

## La Siesta Butter-Bred Holsteins.

We expected when we published Mr. Judson's broad claims for the Jerseys

two weeks ago that he would be taken to task for it. In this issue there are two interesting statements—one for the Holstein-Friesians and another for the Ayrshires—and we expect to have others. Free discussion of these matters tends toward general enlightenment, and about the best way to start discussion is to print something which will make some one else angry. Read what is printed in this issue, and if that makes some one else angry, we shall be glad of it.

Speaking of Holstein-Friesians, we doubt if all readers know what fine animals have been recently brought to the State by our leading breeder, F. H. Burke of this city. The commanding portrait on this page represents the head of the La Siesta herd, which won the highest prizes at this year's State and

Tanforan Fairs, and thus led a company of fine bulls and cows which won so many prizes at this year's fairs that it takes two pages of close printing in Mr. Burke's catalogue to merely enumerate them.

We desire to call special attention to this catalogue, because it gives so much information about the cattle and, incidentally, about the deeds of the breed through its leading representatives. Mr. Burke calls his cattle a herd of "butter-bred Holsteins," but we believe "bread-and-butter Holsteins" would also be a justifiable epithet. Such cattle multiply the products of the dairy which contains them, and evidently what we want for dairy progress is to breed cattle which give more milk to yield more butter to make more money to buy more cattle, etc. Mr. Burke's catalogue shows how this can be done; and if there are other ways to do it, those who advocate them should let the people know the methods.



Subsoiler in Windermere Orchard, La Mirada, Los Angeles County.



Irrigating by the Furrow System in a Southern California Orange Orchard.



Bull Gerben Empress Josephine, Owned by F. H. Burke.



# PACIFIC RURAL PRESS.

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E. J. WICKSON.....Horticultural Editor.

San Francisco, December 8, 1900.

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## The Week.

The Fruit Growers' Convention is the greatest thing in sight this week. The weather has been delightful for it, and the consciousness of a good start on the rain year in all parts of the State has encouraged many to treat themselves to a visit to the city and its delights, at the same time enjoying the comforting reflection that they are going to expense for business reasons. It is a very fortunate combination of circumstances and ideas.

Those who remain at home are finding conditions fine for work. There is the utmost activity everywhere. All over advices are of wide plowing and sowing and the fullest confidence in the outlook. City business is adding holiday lines to the great activity in staples, and things are as brisk as we have ever seen them in San Francisco.

Wheat sagged immediately following last review, but has since recovered and closes firm at last quoted rates. Barley market shows improved condition. Oats and corn are holding their own. Rolled barley is slightly higher, other mill feeds unchanged. Hay is quiet, but best is steadily held. Prices for beef and mutton are again marked up, market being strong. Hogs are in good request at steady values. Butter of high grade is favoring producers. Cheese market shows healthy condition. Fresh eggs are scarce and bringing good prices. Poultry market has been demoralized, owing to glut of arrivals, largely Eastern product. Onions have again advanced. Potatoes are moving slowly. Bean market shows firmness in the main. Pinks have advanced. Fresh fruit market is ruling steady for apples and pears. Citrus fruits have been inclining in favor of buyers; oranges, as a rule, are not ripe and the weather, as a rule, not warm enough. Dried fruit market is dull, as it generally is during the mid-winter holiday season. Wool shows no improvement. Hops are quiet; both buyers and sellers indifferent.

Congress is now in session. The President's message urges liberality to measures calculated to advance the agricultural interests. The Secretary of Agriculture is continuing his policy of advancing the knowledge of the West by close investigation and research, and certainly the newer regions of the country have never had in high place so active and discriminating a friend as Secretary Wilson. The fact that he will remain in the Cabinet is heard with wide satisfaction.

Urgent telegrams from Washington promise the rapid advancement of the Isthmus canal enterprise, but our Representatives declare that the fullest weight of the Pacific coast States should again be thrown into the balance to insure the result. Let everyone and every organization make a last push for the canal through our congressional representatives.

## The Fruit Growers' Convention.

We are compelled to go to press with this issue of the PACIFIC RURAL PRESS while the annual convention of California fruit growers is still in progress in this city, and can, therefore, only take side glances at its earlier phases. It is, perhaps, the greatest convention of its kind ever held in California. It is great in numbers, for the unprecedented attendance of 350 or more marked the opening session on Tuesday morning. It is great in its breadth of representation, for there were delegates present from all parts—from the south line of San Diego to the north line of the Sacramento valley, and from the coast to the mountains. It is great in the display of fruits, fruit products and appliances, for there has not been at any convention so good an exhibit of horticultural materials and so well arranged for examination. It was displayed on the sides and walls of the assembly room, and furnished a splendid setting for the convention which was solidly packed in the central area. A noticeable feature of the audience as seen from the stage was the relief from the dull shades of the masculine element afforded by the bright colors of the feminine adornments. We do not remember looking upon a fruit convention audience which included so many ladies; in fact, there were so many that the idea of a ladies' meeting for purposes known only to themselves was readily approved, and such a meeting was held as auxiliary to the convention. The convention is also notable in the uniqueness and freshness of many of the topics presented. It is richer in dramatic situations and in interesting incidents than conventions usually are. We are quite sure that the meeting, even in its opening sessions, is of such a character and manifests such spirit and activity that no one who is in attendance can regret the effort or sacrifice which may have been required to secure it.

The opening session was far better provided for than usual by the programme committee. The annual address of the distinguished president of the State Board of Horticulture was marked by wider range of topic than usual. He remarked that this is the twenty-fifth State Fruit Growers' Convention, and the twenty-first under the auspices of the State Board of Horticulture. Its chief business will probably be to extend the boundaries of co-operation and to discuss the changes that may be necessary to realize it. While this is an aim the importance of market development should not be forgotten. He recommended that 1% of all sales should be set aside for the purpose of establishing Eastern agents; also that the convention adopt a resolution asking the Legislature to appropriate \$10,000 for the purpose of carrying on the work of investigating methods of combating the injurious insects which are so baneful to the fruit interests of the State. He saw danger ahead in the Belgian hare business. There was a possibility of those animals becoming a pest, if many of them were permitted to run wild, as they increased with phenomenal rapidity. He denounced the adulteration of food products as the greatest curse ever conceived by the human brain. We have most excellent dairy, olive oil and drug laws, but their enforcement is what we desire. Our Legislature should appoint some bureau to enforce those laws. The fines would more than reimburse the State for the prosecutions.

But all these matters of good sound doctrine were eclipsed by the uniqueness and boldness of Mr. Cooper's tribute to the climate of California. He compared the State in the matter of soil and climate and the excellence of its products, with Egypt in the day when it was the garden of the world. Our great State could support millions where it was now populated by thousands. San Francisco will be to the Pacific Ocean what New York is to the Atlantic. The trade of the islands of the Pacific and the Orient will be ours. We must, however, cultivate spirit and sentiment and not devote all our energies to mere money-making. The particular manifestation of sentiment advocated was to reverence the past and inspire the future by rescuing from the destructive extremes of the eastern climate an ancient Egyptian monument which is there rapidly falling to pieces. He advocated the removal of the obelisk, Cleopatra's Needle, from New York to the Golden Gate Park in San Francisco. He stated that the

intense cold of the New York winter was causing the hieroglyphics on that monument to scale off, and declared that it would be criminal to let those inscriptions be effaced. It should be brought to this city and set up in Golden Gate Park. Our own climate was like that of the land of the Pharaohs. The Needle could here stand in the open, and it would be fitting that the monument raised by the fruit growers of ancient Egypt should be placed in the country where horticulture has reached its highest perfection to-day. He suggested a resolution requesting the State Board of Trade to investigate and act in the premises, to the end that we might preserve a priceless treasure of antiquity.

Another notable address of the morning session was that by W. H. Mills of San Francisco, and it was marked throughout by his characteristic breadth of view and eloquence. Speaking of the superior economies of California production of fruit, he mentioned first the great efficiency of the labor we have as compared with the labor of Europe, especially as aided by our recourse to improved machines and implements. The second is the difference in the fertility of the soil. There is a third and an exceedingly important consideration. It is that of taxation. In France the fruit grower will pay 12% per annum on the gross proceeds of his farm or orchard. The maintenance of the standing army is costly. After taxes are collected, if the amount does not meet the deficiency, the tax gatherer goes out once more, and the farmer can never tell when his taxes are paid. The truth is that we can, under the present conditions, produce fruits in California and lay them down in any part of the world cheaper than they can be produced there. Mr. Mills spoke enthusiastically in favor of the Nicaragua canal, declaring that it would give us the freedom of the sea, and solve the question of the distribution of our products at minimum expense. Its benefits would be immeasurable from every point of view. California was destined to be the orchard of the world.

Mr. Mills gave the convention the opportunity which now offers for the display of California products at the great Pan-American Exposition at Buffalo. He stated that one-fourth of all the space in the horticultural building at that fair had been awarded to California, and it would be filled by the Los Angeles Chamber of Commerce, the State Board of Trade and the Southern Pacific Company, so the State was sure of representation. The convention was, however, startled by the boldness of another proposition, viz.: to buy the exclusive right to sell fruit on the grounds of the exposition. Mr. Mills said he had corresponded with the managers of the exposition and secured from them the promise that they will sell to any firm the exclusive concession for the sale of fruit on the grounds. What we want to do now is to secure that concession for California. The Buffalo people were willing to let the concession to a firm or to an individual, but would not agree that California fruit alone should be sold. Mr. Mills courted the opportunity to have fruit grown in other States sold beside the California fruit for purposes of comparison. He looked upon it as one of the very best opportunities to show the superiority of California fruit and hoped the concession would be secured by a California firm.

After the general propositions of the two opening addresses the convention addressed itself more directly to the features of the fruit shipping business of the past season. First came the report of the California Fruit Growers & Shippers' Association, by H. Weinstock, president. The report attempted to explain the disastrous results which shippers and growers experienced by attributing them to the following causes: Poor packing, length of time consumed in transportation, the very large crop of Eastern fruit, the plague scare, and the fact that owing to the several seasons of drought the keeping qualities of California fruit were not so good as usual. Commenting on the disastrous delays in transit, it was shown that the time made in previous years was seven days to Chicago, nine days to New York, and ten days to Boston and Montreal, whereas this year it took, as a rule, fifteen days to Chicago, sixteen days to New York, and seventeen days to Boston. The report added: "Whatever may have been the



causes for these unfortunate delays in transit, the fact remains that unless the railway companies can remedy the matter and transport fresh fruit within the time made in previous years, or less, the industry stands practically ruined and the State may as well abandon all hope of ever profitably shipping fresh fruits to the East." On the heels of this declaration came the essay by W. B. Gester of Placer county, which is published on a following page of this issue.

The experiences of the last summer in fruit shipping was continued by Hon. Alden Anderson of Suisun. Naturally, particular attention was given to Mr. Anderson, as he is a well known shipper, and his position in the Legislature adds to his prestige. His essay satisfied the convention as a true picture of existing evils. He said, among other things:

The length of time in transit detracts from the value of fruit, and irregularity tends to demoralize markets; for instance, I shipped a car of Bartlett pears from Suisun to Cleveland, Ohio, on July 11th of this year and a similar car to the same place on the 14th. Both cars were received and sold on Thursday, the 26th following, one car being fifteen days and the other twelve days on the road. Both were reported overripe and in poor condition, and sold accordingly. The receipt of the fruit in such irregular manner caused two cars to be sold on the same day, when they should have been sold three days apart. The length of time required in transit caused the fruit to be exposed for sale in an overripe condition, necessitating its immediate use, and it had to be sold to peddlers and the like, which always means low prices. Many cars of fruit that were sold f. o. b. to outside Eastern points were rejected simply on account of being overripe. These were generally diverted to the auction rooms and helped to still further depress the market. These are only instances—all shippers have had the same experience; in fact, it was the general experience this year. They serve to illustrate the point I wish to make, which is the necessity of quicker transportation and a schedule time for the shipment of our fresh fruits. \* \* \* Apparently there was no effort made to favor the shipment of perishable fruits, for at the time we received some of our poorest service we had cars of dried apricots delivered in New York in thirteen days. We have had no reduction in freight rates since 1887, and while the enormous increase of shipments of green fruit would seem to have warranted a reduction ere this, growers and shippers generally, I think, would waive the discussion of that subject if they could be assured of an expedited service and schedule time.

This declaration met the favor of the convention. Half a dozen speakers who took part in the discussion declared that time, some regular, reasonable time in transit, was the essential thing. R. D. Stephens of Sacramento, chairman of the committee on transportation, then read the report of his committee, including a letter from Freight Traffic Manager Sproule of the Southern Pacific in regard to the general demand for an improved train service and a reduction in the carload minimum during the summer months. Mr. Sproule attributed the poor service to the congestion of traffic resulting from the trouble in China and the demands made on the carriers to transport Government troops and supplies. He also explained that it is no longer possible for the Southern Pacific to obtain its coal supply from Pacific coast ports. Coal has had to be hauled from Ogden to supply the entire line west of Ogden as far south as Bakersfield, and this fact partly accounted for the scarcity of locomotives, a condition that Eastern locomotive builders could not remedy on account of the pressure from every direction for the completion of earlier orders. Mr. Sproule also said in his communication that if the 26,000-pound carload minimum is one that cannot be maintained with safety to deciduous fruits in transit, it is a point that the company will gravely consider.

The foregoing were among the statements in Mr. Sproule's letter. The convention discussed them at considerable length and asked each other questions about them and were evidently disposed to consider the situation in China and the coal traffic in the light of a pretext. But nothing satisfactory was brought to light beyond the fact that the time required to reach Eastern markets was ruinously long. Evidently there was need of more light from the railway company and while a motion was being made to invite Mr. Sproule to attend the convention and participate in its deliberations that gentleman arose in the rear of the hall and announced his presence. It was a dramatic situation. The motion died in the making and Mr.

Sproule was called to the front. He made a very interesting speech affirming the reasons given in his letter for his company's share in the delayed traffic, assuring them that other lines were concerned, that his company would do its best to see that this year's evils did not occur again and assuring the growers of the sincere interest of the railway in their welfare. It was a satisfactory social event in the life of the convention. It remains to be seen how much can be accomplished through it.

The morning of the second day saw a greater throng in the hall and the galleries were called into requisition for seating capacity. The subject was co-operation, and the California Cured Fruit Association, which is the company name of the prune combine, was given the right of way. The speaker was President Bond, and he gave a very thorough analysis of the prune effort and its present successful position. He said that the tonnage of the year's crop will exceed that of last year. If the weight of the small sizes, for which no prices have been made, and which may well be converted into a by-product, is deducted, the remainder will be very little greater. The Packers' Company say that the outlook is good and that they expect to sell the entire crop. The obstacles with which the Association has had to contend have been both numerous and formidable. It has hard to compete with an unusually large crop of fruit of every kind throughout this country and Europe. The prune crops of France, Bosnia and Servia are unusually large, and, as a consequence, the price of prunes has been too low in Europe to admit of competition from this country. But the greatest drawback to making sales has been the competition of the outside packers. As soon as prices were made by the Association, they were cut by the outside packers \$10 per ton. This discount naturally diminished the sales of the former and, coupled with the reports persistently circulated that the Association could not maintain its prices, had the effect of impairing the confidence of the trade in its stability. But, notwithstanding these adverse conditions, the Association has sold one-fourth of the entire crop of the State, and is to-day practically in control of the market.

The success of the undertakings centering at San Jose was farther emphasized by Col. Philo Hersey of that city. He spoke of the co-operation of growers and packers and claimed that the assistance of the practical packer was a necessity to the organization of producers, and thus far there had been no violation of good faith with the growers. The grower acts as one man through one official head, and the packers do likewise. Co-operation among the packers might not insure riches, but it made a profit certain. It saved the members from loss through commercial failures, sustained values, raised the standard of goods and created a better and wider market. With successful co-operation on the part of the growers, the packers would, with a fair amount of skill and common sense, have the advantage of doing business at a maximum of profit and a minimum fear of loss. To be effective such co-operation should be universal, and Colonel Hersey expressed the opinion that all of the packers would eventually avail themselves of the advantages of co-operation and would work in harmony with the association of growers.

A. H. Naftzger, president of the Southern California Citrus Fruit Exchange, also gave an address on co-operation, dealing broadly with the principles involved and making sharp points strongly. Mr. Naftzger claimed that co-operation is not a scheme of philanthropy by which the indolent and careless are made prosperous and contented. It is not a trust nor a combine in the modern acceptations of those terms. It seeks to end the detrimental warfare of competition; to put growers into the position of mutual helpfulness, instead of ruinous antagonism, and delivers them from the mercies of the middlemen. Without co-operation, advantage is taken of the necessities of one grower to force down the price of his neighbor's product. Co-operation made the fullest remuneration for individual toil, it reduced the expenses, and made possible the widest and best markets to the grower. Upon even a selfish plane co-operation has been proved the best policy, and organization was a necessity for the California fruit

growers. Under individual effort a man depended on short crops elsewhere and the caprice of speculators. Combination made possible the most desirable economies. Our theories are always made to yield to practical commercial requirements. By general co-operation and control of the market the producers can prevent extreme fluctuations. Upon the question of transportation Mr. Naftzger entered into an arraignment of the transportation companies and advised the fruit growers to stand together in order to press their demands for an improved service.

We can in this issue only give hurried reference to the leading topics and transactions. There will be much to come in future issues as the fuller proceedings become available. We have said enough to show that the speakers are alert and their topics pressing. It would be well for the advancement of the State if the attendance could be counted by thousands instead of hundreds.

WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending December 3, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

COAST AND BAY SECTIONS.

Mild, pleasant weather has prevailed during the week, with frequent light frosts in some sections and heavy fogs in other localities. The recent heavy rains apparently extended to all parts of the district, and everywhere the soil is in excellent condition for farm work, with the exception of low ground in places, which is still too wet for cultivation. Farmers are rushing forward the work of plowing and seeding, and preparing for an increased acreage of grain. Wheat sown before the rain is up, looking strong and has a splendid color. Green feed is making rapid growth. Tree pruning is in progress.

SACRAMENTO VALLEY.

With the exception of light showers in some portions of the valley on Wednesday and Friday, fair weather has prevailed during the week, with nearly normal temperature, and conditions have been very favorable for farming operations. Light frosts have occurred in some sections, but no damage has been done. Crops are in excellent condition and making good progress. Summer-fallow wheat is up and growing rapidly. Plowing and seeding are progressing. It is reported that in most of the grain districts the acreage this year will exceed that of last season. The heavy rainfall of the preceding two weeks has had no injurious effect, though farm work has been somewhat retarded. Pasturage is plentiful. Large quantities of oranges and olives are being gathered and shipped.

SAN JOAQUIN VALLEY.

The weather has been generally favorable for farm work, though the mornings have been cloudy or foggy. Light frosts have occurred in many places and killing frosts at Independence. The recent heavy rains have softened the soil in all sections, and plowing and seeding are progressing, except in some of the low lands, where the ground is too wet for cultivation. The grain acreage will probably exceed that of last season. Grass and early sown grain have grown rapidly since the rain. Oranges are being gathered and shipped.

SOUTHERN CALIFORNIA.

The weather has been clear and warm, but with light frosts in exposed places in some sections. Early sown grain and grass have made remarkable growth, and oranges have ripened rapidly. In the vicinity of Duarte it is said that the orange crop will be about the same as last season's. Plowing and seeding are progressing. A correspondent at Anaheim reports that the flood caused no damage in that vicinity. The heavy rains of November were very beneficial in all sections. Delayed rainfall reports: Poway, 3.19; Cuyamaca dam, 14; Moreno dam, 6; Campo, 4.01; Otay dam, 2.75; Sweetwater, 1.50.

LOS ANGELES SUMMARY.—Generally warm, with considerable drying north wind. Plowing continues, and farmers are busy putting in crops. Orchards are being cultivated. Tree pruning is progressing.

Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Dec. 5, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week | Total Seasonal Rainfall to Date | Total Seasonal Rainfall Last Year to Same Date | Average Seasonal Rainfall to Date | Minimum Temperature for the Week | Maximum Temperature for the Week |
|----------------------|-----------------------------|---------------------------------|------------------------------------------------|-----------------------------------|----------------------------------|----------------------------------|
| Eureka.....          | .34                         | 14.03                           | 21.13                                          | 9.83                              | 40                               | 80                               |
| Red Bluff.....       | .10                         | 6.63                            | 7.43                                           | 5.98                              | 31                               | 68                               |
| San Francisco.....   | .00                         | 6.70                            | 7.20                                           | 4.12                              | 33                               | 58                               |
| San Francisco.....   | .00                         | 5.85                            | 7.76                                           | 4.60                              | 42                               | 80                               |
| Fresno.....          | .00                         | 5.10                            | 3.38                                           | 1.91                              | 38                               | 58                               |
| Independence.....    | .00                         | 2.14                            | 1.22                                           | 1.54                              | 30                               | 80                               |
| San Luis Obispo..... | .00                         | 8.66                            | 5.90                                           | 3.83                              | 38                               | 80                               |
| Los Angeles.....     | .00                         | 6.79                            | 2.51                                           | 3.28                              | 48                               | 84                               |
| San Diego.....       | .00                         | 1.73                            | 1.28                                           | 1.54                              | 52                               | 78                               |
| Yuma.....            | .00                         | .02                             | .58                                            | 1.32                              | 42                               | 76                               |



## THE FIELD.

## University Seed Distribution.

By E. J. WICKSON and J. BURTT DAVY, of the Agricultural Experiment Station of the University of California.

The growing popularity and increasing usefulness of our effort at plant and seed introduction, trial and distribution, is shown by the following outline of transactions for the last three years, viz:

|                                | 1897-98. | 1898-99. | 1899-1900. |
|--------------------------------|----------|----------|------------|
| Number of applicants.....      | 661      | 859      | 1,007      |
| Packages sent by mail.....     | 861      | 984      | 1,566      |
| Packages sent by express..     | 81       | 43       | 0          |
| Plants and roots distributed.. | 5,926    | 3,251    | 4,020      |
| Ounces of seed distributed..   | 3,884    | 8,370    | 11,613     |
| Packets of seed distributed..  | 2,549    | 5,076    | 5,085      |
| Postoffices reached.....       | 302      | 360      | 436        |
| Counties reached.....          | 51       | 52       | 52         |

## NEW WHEATS.

Increased interest has recently been manifested in the effort to secure white wheats which might be desirable to take the place of the varieties which have long been grown in California and show signs of deterioration. To secure such new varieties of white or light colored wheats we have profited by the enterprising work of the Section of Seed and Plant Introduction of the U. S. Department of Agriculture. The following are offered:

| Nos.  | Names.                | Nos.  | Names.               |
|-------|-----------------------|-------|----------------------|
| 4280. | Clawson Longberry.    | 5075. | Allosa.              |
| 4281. | Early Genessee Giant. | 5076. | Steinwedel.          |
| 4282. | Early Arcadia.        | 5077. | Canning Downs.       |
| 4283. | Diamond Grit.         | 5078. | Early Baart.         |
| 4392. | Little Club.          | 5079. | King's Early or Rose |
| 4631. | Canadian Hybrid.      |       | Early.               |

The above will be sent in half-pound sacks, 10 cents for each kind ordered, postpaid.

## FORAGE PLANTS—GRASSES.

In recommending the following named forage plants for trial, it should be borne in mind that we have not yet succeeded in finding a grass that will meet all the needs of a California stock rancher. Investigation into the forage resources of our own State and of foreign lands, have as yet failed to discover a perennial ("root-growing") grass that will keep green throughout nine weeks or more of absolute drought, on a sun-baked ridge or mountain side, with a shallow soil, and unrefreshed even by ocean fogs. Fortunately, we have many annual ("seed-growing") grasses and other forage plants which "cure on the root" and in a measure remedy this defect. The perennial species here recommended for trial have been found useful on fairly deep soils, where they resist the drought of an ordinary California summer much better than other grasses in use, and considerably prolong the season of green feed.

**REED FESQUE.**—This European forage plant has been cultivated for several years in the Experiment Station grass garden at Berkeley. It is a perennial species, and during the past three dry seasons has, without artificial irrigation and in a dry adobe soil, shown itself to particular advantage as a drought-resistant grass producing a considerable quantity of nutritious foliage. It seems to be equally at home in irrigated or naturally swampy ground and is considered one of the best of forage grasses for such situations. After cutting for seed at the beginning of last August, and without any irrigation, this grass threw up a strong second growth over the whole plot. Seed raised at Berkeley, 5 cents per package, postpaid.

**GIANT RYE GRASS.**—A stout grass 6 to 7 feet in height, yielding a heavy weight of hay which, though coarse, has attracted attention on account of the large bulk produced on a small area. We have neither experience nor records as to its forage value, but appearances are against its being of value for pasturage; it may prove suitable for hay or ensilage. It thrives on adobe soil for several years in succession, without "crowding out" as do several species of the genus. Seed raised at Berkeley, 5 cents per package, postpaid.

**LARGE WATER GRASS.**—A valuable perennial forage grass, said to keep green during the hottest summer time (Mueller), and to have extraordinary drought resistance. It made a splendid showing of bright green foliage as late as July 6, 1900, in dry adobe soil without any artificial irrigation. Seed raised at Berkeley, 5 cents per package, postpaid.

**RAY GRASS OR "RYE GRASS."**—Several improved varieties of Ray grass are now offered for distribution, which have been raised at Berkeley from seed donated by Messrs. Sutton & Sons, Reading, England, who have devoted much time and close attention to the selection and improvement of strains of the best forage grasses in general cultivation. Of these we offer:

|                             |                         |
|-----------------------------|-------------------------|
| 1. Imported Italian.        | 6. Evergreen Perennial. |
| 2. Selected Italian.        | 7. Selected Perennial.  |
| 3. Ordinary Italian.        | 8. Dwarf Perennial.     |
| 4. Evergreen Giant Italian. | 9. Annual or Common.    |
| 5. Ordinary Perennial.      | 10. Pacey's Perennial.  |

The foregoing will be sent at 5 cents for each kind ordered, or the collection of ten kinds for 30 cents, postpaid.

## FORAGE PLANTS—OTHER THAN GRASSES.

**PROLIFIC SALT BUSH.**—This is another of the numerous species of Saltbush from Australia, which is proving thoroughly adapted to California conditions. "It is found over the greater part of the saline desert of Australia, reaching the south and west coasts" (Maiden). It is a dwarf annual, tolerant of several degrees of frost, and is a remarkably prolific seed producer. In the immediate vicinity of the coast it tolerates the cool, foggy summer climate much better than *Atriplex semibaccata*, and is therefore recommended for trial among the coast sand-dunes and alkali flats; it also thrives on adobe soils. It is considered "as among the very best for Saltbush pasturage" (Mueller). Seed raised at Berkeley, 5 cents per package, postpaid.

**DWARF RHAGODIA.**—A dwarf forage plant from Australia, considered valuable for saline soils; it will also grow on adobe soils. Seed raised at Berkeley, 5 cents per package, postpaid.

**HAIRY VETCH** (*Vicia villosa*, Roth).—An annual or biennial forage plant from Western Asia, yielding heavy crops under varied conditions of soil and climate. One of the most promising plants introduced by this Station, and recommended for trial as a winter-growing forage plant for light sandy soils along the coast, and as a green-manure plant for orchards, for which purpose early sowing is advisable; also recommended for trial as a combined sand-binder and forage plant for the coast sand-dunes. Seed raised at Berkeley, 5 cents per package, postpaid.

**LARGE WHITE LUPIN** (*Lupinus albus*, L.).—A quantity of seed of this plant, imported from France by the U. S. Dept. of Agriculture, Section of Seed and Plant Introduction, has been placed at the disposal of this Station for general distribution. This lupin is used extensively in southern Europe for green manuring, and is one of the few species adapted to the peculiar needs of California orchards. Early sowing is strongly recommended. Five cents per package, postpaid.

Berkeley grown seed of the following species, which have been tested by us for several years, is now offered as follows:

1. Large Blue.
2. Large Pink.
3. Small Blue.
4. Small White.

Five cents per package, postpaid.

## VEGETABLES.

**VEGETABLE MARROW.**—A variety of squash introduced by the U. S. Dept. of Agriculture, Section of Seed and Plant Distribution, under the number 4366. Seed, 5 cents per package, postpaid.

**ORACH OR ARROCHE.**—An annual spinach. Seed, 5 cents per package, postpaid.

**WATERMELON.**—"Honcharenko," the best of some sixty varieties tested at the Paso Robles sub-station. It is of particularly good appearance, round, small in size, small seeded, very drought resistant, and in quality superior to the "Hungarian Honey" watermelon. Raised from seed sown at Ukrania, Alameda Co., in the hills near Haywards, and donated to the Station by Father Agapino Honcharenko. Seed, 5 cents per package, postpaid.

**KHIVA WINTER MUSKMELON.**—Introduced from Turkestan, by the U. S. Dept. of Agriculture, Section of Seed and Plant Introduction, as No. 3945. This is a small apple-seeded, late winter variety, of handsome appearance but only medium quality. It is promising as a parent for new crosses. Seed, 5 cents per packet, postpaid.

**BROAD OR WINDSOR BEAN.**—In Europe this is a favorite table vegetable, the thick pods being gathered when in a state to open readily, and while the seeds are still young, green and tender. The pods are not edible, and the seeds become leathery with age; even then, however, they can be rendered quite palatable by removing the seed-coats which easily slip off after boiling, leaving the large green cotyledons in a soft and tender state. The seeds are often used after drying, either boiled or in soups. In Europe it is customary to top the plants when the pods have set, as this removes the insects which often settle there and also promotes the filling of the pods. The Broad bean does not endure intense heat or drought and if its cultivation is attempted in the interior, early sowing is recommended. The following varieties are offered: 1. Green Giant; 2. Giant Windsor; 3. Exhibition Long-pod; 4. Perfection; 5. Dwarf Fan or Cluster. The Broad beans will be sent at 5 cents for each kind ordered.

**TOMATO ("Kansas Standard").**—Though not received and sown till late in the season, this tomato made a strong, healthy growth in the Experiment Station garden at Berkeley; and its adaptability to the Bay region climate seems to be demonstrated by the fact that it was the first variety to have ripened seed with us for some years. It is somewhat dwarf in habit and is perhaps somewhat deficient in flavor, but it is a remarkably prolific fruit producer. Seed, 5 cents per packet, postpaid.

**PEAS.**—A number of new varieties of table pea are here offered for more extended trial:

1. Alderman: A tall grower, producing six to eight peas to a pod; flavor excellent.
2. Boston Unrivalled: A tall long pod, a little earlier

than Alderman, and producing six to eight peas to a pod; flavor fair.

3. Nott's Excelsior: A very early and prolific dwarf, pods even and well filled; averaging five peas.

4. William Hearst: Later than Nott's Excelsior, rows rather uneven, averaging six peas to a pod; flavor fair.

5. Quality: A very prolific dwarf, with flavor even superior to that of Alderman.

The foregoing will be sent at 5 cents per package for each kind ordered, postpaid.

## TREES AND SHRUBS.

**SWAMP MAHOGANY GUM** (*Eucalyptus robusta*, Smith).—A handsome, symmetrically branching tree, bearing a large mass of foliage and attaining a height of 100 feet; the leaves are large and broad, dark green and leathery; the flowers large creamy white. It makes a fine avenue tree, and in spite of its leafiness is said to withstand storms better than most species, so that it is often planted as a windbreak. The wood is rather brittle, but Mueller states that it is remarkably durable; in Australia it is much valued for shingles and general building purposes where no great strength is required, as well as for ship building, wheelwrights' work, posts, ties and the manufacture of mallets and other implements. It is considered fairly good even for joists, and makes excellent fuel, though difficult to split. The tree seems to thrive well in low, sour, even brackish, swampy ground near the sea coast, where other eucalypts look sickly, while it is the picture of health. It thrives in the warm interior valleys of middle California and in the southern part of the State. The seed offered was grown at the Santa Monica forestry sub-station. Seed, 5 cents per packet, postpaid.

**BLACK KURAJONG** (*Sterculia diversifolia*).—A fine evergreen avenue tree, native of eastern Australia. In Switzerland it has been found to tolerate 21° Fahr. It is somewhat slow of growth at first, but afterwards gains in rapidity. The tap roots of young trees and the young roots of the old trees are used for food by the aborigines; when boiled they are said to have a flavor similar to that of turnips, but sweeter; the seeds are edible and make a good beverage. Cattle and sheep are fond of the leaves and branches and in some dry seasons have existed for long periods on scarcely anything else, the trees being cut down for this purpose as required. The timber is soft, fibrous and useless. A strong fiber is obtained from the bark, used by the aborigines for fishing nets (Maiden). Seed grown at Santa Monica, 5 cents per packet, postpaid.

**BLUE LEAVED WATTLE** (*Acacia cyanophylla*).—A tall, handsome, ornamental Australian shrub with blue-green foliage. It is inclined to throw up suckers from the roots. Seed grown at Santa Monica. Five cents per packet, postpaid.

**BROAD LEAVED WATTLE** (*Acacia pycnantha*).—A tall shrub or small tree, attaining a maximum height of 30 feet, producing one of the richest tanning barks in the world. It is a tree of rapid growth, content with almost any soil, but generally found in poor sandy ground near the sea coast; it is useful for binding drifting sand (Maiden). The broad leaved wattle is also highly ornamental, producing a beautiful mass of bright yellow flowers. Seed grown at Santa Monica. Five cents per packet, postpaid.

**SILVER WATTLE** (*Acacia mollissima*).—We continue to receive requests for seed of this tree which is valued on account of its rapidity of growth and ornamental character. It is a handsome, winter flowering species. Seed grown at Santa Monica. Five cents per packet, postpaid.

**NEW ZEALAND OIL TREE** (*Alectryon excelsum*).—The demand for seed of this handsome evergreen tree was so great last year that it is again offered; the seed is not ripe, however, and cannot be sent out before December. Five cents per packet, postpaid.

**BELLOTA** (*Cryptocarya Miersii*).—An ornamental evergreen tree with large, broad leaves; native of Chile. The seed has been raised at Niles. Five cents per packet, postpaid.

Application for seeds and plants should be made as soon as the announcement is received. We are unable to continue distribution throughout the year. Address: E. J. Wickson, Agricultural Experiment Station, Berkeley, California. Berkeley, November 24, 1900.

## THE DAIRY.

## Ayrshires at Santa Barbara.

TO THE EDITOR:—In response to your request for information concerning our recent importation of Ayrshire cattle from Vermont to Santa Barbara, I might say by way of explanation for the active part I took in the enterprise that I have always been a great lover of fine cattle, and wanted to help improve the stock of this county, for I believe the financial success of my profession depends to a large extent upon the value of the live stock of a community.

**CHARACTER OF THE AYRSHIRES.**—I selected the Ayrshires because I believed them peculiarly adapted



for this locality. Our hilly and broken pastures are very similar to those of their home in Scotland, where the breed was developed and brought to such a high state of perfection. And, again, their wonderful popularity in Canada and the New England States, after three-fourths of a century's trial, is a strong evidence that they are not only adapted to such ranges, but that they possess a hardiness of constitution which renders them less liable to tuberculosis and other diseases. Henry E. Alvord, chief of the dairy division of the Bureau of Animal Industry, says in his articles on "Breeds of Dairy Cattle" in the last report of the Bureau of Animal Industry:

"Unless it be the little Irish Kerry, there is no cow which excels the Ayrshire in obtaining subsistence and doing well on a wide range of scanty pasture, or in thriving and giving a dairy profit upon the coarsest forage."

"The natural hardihood of constitution renders these cattle admirably adapted to graze on broken and rugged pastures, and in sterner weather, than would be conducive to the well-being of cows of some other breeds."

"The end sought in perfecting the breed has been a large yield of milk without extravagance of food. It is a characteristic of the Ayrshire that she carries her weight only, and lives only, to serve dairy interest with the utmost economy in the utilization of food. Yet, like all other good dairy cattle, the Ayrshire responds promptly and profitably to liberal feeding."

That the Ayrshire will produce both milk and butter at a less cost per pound than other dairy breeds is proven by the records of several of the New England State experimental stations.

The above qualifications, together with quality of milk, makes the Ayrshire an ideal family cow. The milk is particularly adapted to table use and for food for children and invalids, being attractive looking, of a splendid flavor, and extremely easy of digestion.

**THE AYRSHIRE CROSS.**—Another important object in view was to secure a breed that would cross well with the dairy stock already in use, which consisted largely of Jerseys and their grades, and with these I believe the Ayrshire will nick better than most any other breed, producing an offspring with a more compact body and harder constitution than the Jerseys, that will yield a milk richer in butter fat than the Ayrshire.

**CO-OPERATIVE BUYING.**—With these facts in mind, I tried for several years to interest some of our dairymen and stockraisers in the breed, and always with very good success, until they would ascertain the cost of transportation for a single animal, when they always became discouraged.

Finally I decided to try the virtues of co-operation, and after securing from C. M. Winslow, secretary of the American Ayrshire Breeders' Association, an estimate of prices and an offer to personally select and ship a carload for us, I set about soliciting orders for a club, and in a short time had the money deposited in bank to pay for the same. By this plan we secured a fine lot of youngsters from some of the choicest strains of blood to be found in the New England States, and at prices, laid down here, as low if not lower than would be asked for the same grade of stock if bred here. After a thirteen days' continuous run clear across the continent they all arrived here in good condition, without a single loss, and, although quite a number of the heifers were almost due to calve, they seemed none the worse for their long ride and quickly adapted themselves to their new surroundings, making the most of our fine winter pastures, and in a few weeks dropped strong, healthy calves. They have all developed very fast since their arrival, and show by their growth and yield of milk that they will thrive as well here as in their New England home.

**WHAT THEY HAVE DONE IN SANTA BARBARA.**—The following are some facts about the young Ayrshires owned by parties in this vicinity:

Mary Bryant 15454 (owned by the writer), bred by Oliver Smith, Chateaugay, N. Y., dropped March 1, 1897; weight, 1060 pounds; color, a rich mahogany, beautifully flecked with white; sired by Beppo 4678, sire of Myrtle Beppo, record 10,023 pounds milk, 557 pounds butter; dam, Miss Mary 2nd, record 978 pounds milk, 46.78 pounds butter in twenty-four days in February last; second dam, Miss Mary, record 58 pounds milk per day; third dam, Killowie Maid, imported, record 60 pounds milk per day. Beppo's dam, Myrtle Dell, is the dam of Rena Myrtle, who made a record at the Vermont Experiment Station of 12,172 pounds milk, 546 pounds butter in one year. She is also the dam of Casino 3900, who has daughters to his credit with milk records ranging from 8409 pounds to 10,645 pounds, and butter records of from 405 to 572 pounds, per year. Mary Bryant produced 7702 pounds milk from March 1 to November 26, 1900, and tested 3.83% butter fat. She averaged 904 pounds milk per month for six months and gained 175 pounds in weight. She is due to calve again March 1 and is still giving 25 pounds milk per day. These records were made on dry feed, confined on town lot. She was awarded first prize in her class at the Santa Barbara County Fair.

Fanny Beppo 15455, owned by R. C. Rodgers, Santa Barbara, made a record at thirty-four months of age of 36 pounds milk per day—240 pounds per

week, 1034 pounds per month. She was winner of the second prize at the Santa Barbara County Fair.

May C. 2nd 14649 at thirty-one months of age gave 29 pounds milk per day, testing 3.83%.

Little Glen 15463, owned by A. W. Canfield, Santa Barbara, at twenty months of age gave 26 pounds milk per day and tested 4.09% butter fat.

The others are all doing well and proving entirely satisfactory, but have had no records reported for them.

Hesselrig 6900 is a fine bull, owned by Dr. H. L. Stambach, is two and one-half years of age and weighs 950 pounds; was sired by Beppo 4678; dam a full sister of Mary Bryant (see her pedigree above). His color, which is now the fashionable one for the breed in Scotland and Canada, permits his rich yellow skin to be plainly seen. His conformation and disposition are all that could be desired. He was the winner of the first prize at the Santa Barbara County Fair.

We also have two grandsons of Rising Star 5758, winner of the first prize at the World's Fair for two-year-olds, and one inbred grandson of Casino 3900.

Santa Barbara.

JAS. H. HESTER, V. S.

### The Holstein-Friesians.

TO THE EDITOR:—I have waited long and anxiously for some one to take up the virtues of Holstein cattle and dilate thereon, and I was somewhat disappointed over Mr. Judson's remarks as reported in last week's PACIFIC RURAL PRESS. Permit me to explain. I think I have handled every known breed that has cut any figure in the prosperity of the farmer or dairyman; and, when the advantages and markets of California are considered—to me—the Holstein leads them all, for, while I admit that the Jersey shows a higher per cent of butter fat, that is not the only thing to keep in mind.

**MULTIPLE PRODUCTS OF DAIRYING.**—Butter is only one of the many things to which a dairyman should give attention. To-day I find Eastern cream cheese selling in this little town at 20 cents per pound. For veal I have never received less than 8½ cents per pound. Beef is high at all times and pork is in good demand; and I say for the farmers as a class, to make a success of the business, they must keep something else than butter in mind.

**FOR BUTTER.**—But to confine ourselves to butter alone, let us see what the Holstein has done. A short time ago you published a statement of a cow owned by F. H. Burke of San Jose, which he unfortunately lost. Her record shows: Milk—101 pounds in one day; 26,021 pounds in one year. Butter—28 pounds 2½ ounces in seven days; 95 pounds 2½ ounces in thirty days. So much for one in California. In northern New York, where they have been bred for years, it was not unusual for them to give as high as 70 pounds per day, and I have known them to reach 50 pounds daily with their first calf, this quantity testing high enough to show more butter fat per milking than any ordinary Jersey cow, for it is easy to see that a cow gives more butter fat when giving 50 pounds at 3½% than a Jersey will when giving but 25 pounds at 5%.

**SKIM MILK CALVES.**—Not only that. Look at the increased quantity of skim milk which must be considered if the highest gain is of any interest. A short time ago I sold a grade Durham and Holstein calf (sire a thoroughbred Holstein), raised on skim milk and a little oilmeal, which brought me \$9.50 at 8½ cents per pound when six weeks old. I tried to repeat the experiment with a better bred Jersey calf and did well to have it come out alive. That is where the virtues of the Holstein come in play. They are docile and easily handled, good feeders and lack the daintiness and nervousness of the Jerseys; they respond wonderfully to good treatment.

**DAIRY BREEDS.**—My principal experience was gained in eastern Ontario, Canada, where almost every breed, and thoroughbreds too, are given attention. In my native town Mrs. E. M. Jones owns the gold medal herd of Jerseys in America. I believe they are second to none, but her profits are largely made in selling for breeding purposes. There are Ayrshires, too, in that section, to which California might give attention with profit. I have had grade Ayrshires give as high as 53 pounds daily on grass alone. Then there are others, among which were Gov. Morton's Guernseys of New York, but a few miles south of us; but, putting all comparisons aside, if properly handled and properly bred, the Holstein would outshine all others in California to-day if thoroughness and financial returns received our first consideration.

**ALFALFA.**—Mr. Judson lays great stress too on the merits of alfalfa. Do you not know that in some sections of "cold Canada" they raise an average of eighteen tons per acre of corn for the silo? And when Gov. Morton thinks it good enough for his Guernseys, don't you think it would sustain life in even a California Jersey? You need a silo and corn, which may be produced with less water, less labor and with more profit; and for farmers as a class, some need to go back East to learn how to dairy.

I visited our creamery here last spring and found

the highest herd average to be 18 pounds of milk per day per cow, and not one of its patrons relying on anything but alfalfa to give such wonderful results, and selling wheat and barley for barely a cent per pound. When I talk of nutritive ratio or a balanced ration, they look wise and nod—that's "book farming."

Now I am giving but little attention to anything but grapes, and will leave you to teach them "how to make the most of everything." FRED H. LEE.

Lodi.

## THE IRRIGATOR.

### The Irrigation Congress at Chicago.

TO THE EDITOR:—The telegram sent by the National Irrigation Congress at Chicago, urging upon President McKinley the importance of the irrigation and forestry problem and requesting him to, in turn, urge upon Congress the advisability of some definite action, has done more to direct public attention to these important national questions than any other one thing. The telegram was as follows:

TO THE PRESIDENT:—The ninth annual session of the National Irrigation Congress, now in session in the city of Chicago, respectfully urges that in your message to Congress you call attention to the national importance of the preservation of our forests and the extension and conservative use of the forest preserves, and, further, that you emphasize the need of national action to store the flood waters that now go to waste.

"Save the Forests and Store the Floods" proved a popular motto at the Chicago Irrigation Congress. Its sessions bore a marked atmosphere of thoughtful consideration of how these great objects could be accomplished and a general spirit of harmony and co-operation pervaded the atmosphere. Much satisfaction was expressed at the growth of the national irrigation sentiment in the East and the interest and active co-operation afforded by eastern business men.

Great as is Chicago, with her people equalling in numbers a third of the entire population of the western half of the United States, yet the National Irrigation Congress was recognized as the exponent of a national movement, and caused no little local and general comment. Chicago newspapers devoted their columns to its meetings and Chicago's largest business men attended them. The great problem of the reclamation of the millions of arid acres was recognized at its true value and the incalculable benefits to result appreciated. The national standing of the national irrigation question is an assured fact.

**RESOLUTIONS.**—The following resolutions were adopted by the National Irrigation Congress, November 24, 1900:

We hail with satisfaction the fact that both of the great political parties of the nation in the last campaign declared in favor of the reclamation of arid America, in order that settlers might build homes on the public domain, and to that end we urge upon Congress that national appropriations commensurate with the magnitude of the problem should be made for the preservation of the forests and the reforestation of denuded areas as natural storage reservoirs, and for the construction by the National Government, as part of its policy of internal improvement, of storage reservoirs and other works for flood protection and to save for use in aid of navigation and irrigation the waters which now run to waste and for the development of artesian and subterranean sources of water supply.

The waters of all streams should forever remain subject to public control and the right of the use of water for irrigation should inhere in the land irrigated, and beneficial use be the basis of measure and the limit of the right.

The work of building the reservoirs necessary to store the floods should be done directly by the Government under existing statutes relating to the employment of labor and hours of work and under laws that will give to all American citizens a free and equal opportunity to get first employment, and then a home on the land.

We commend the efficient work of the various bureaus of the national government in the investigation of the physical and legal problems and other conditions relating to irrigation and in promoting the adoption of more effective laws, customs and methods of irrigated agriculture, and urge upon Congress the necessity of providing liberal appropriations for this important work.

**A WISE MOVE.**—The holding of the National Irrigation Congress in the East, as it turned out, was a wise move. The people of that half of the country have had the subject of national irrigation brought home to them in a manner not otherwise possible. The far-reaching importance of the problem has been presented to them and a genuine interest has been awakened. Instead of finding opposition in the East the Congress found that eastern men of prominence were more than interested in a proposition which promised an increased western population of millions of people.

As the "enemy's country" has been invaded, the myth of eastern opposition has faded away and its people are found to be anxious to see inaugurated a national policy of western arid land reclamation.

The western delegates went home with the feeling that they have the hearty support of eastern interests in securing action which will open to settlement half a continent, capable of supporting fifty million



people. They cannot but feel that this support is growing; that it is developing into a great movement; that many people are realizing that national action would meet such a western development as would increase the national wealth beyond measure.

**THE OPPORTUNITY OF THE WEST.**—The time seems fully ripe for the West to take a firm and decided stand on the question of national irrigation and something great may be accomplished at once. Why not? It is as right that Congress should appropriate money for storage reservoirs as for river and harbor improvements. The building of storage reservoirs would obviate the necessity for much river expenditure and would help navigation, and the home building area of the United States would be vastly increased. And now if the West makes this demand the East will back it up, for the benefit would not be local.

Every western paper is interested in seeing this development accomplished. What would be the result of an appropriation of eight or ten million dollars spent annually in the West for irrigation construction? The immediate stimulation would be enormous and the future benefit greater. This policy should be inaugurated and the western press should urge it with one voice. It is a national matter. It can be productive only of great good. The East is responsive; will the West be aggressive; it is time to work.

It is the opinion at Washington that \$40,000,000 will be appropriated by this Congress for river and harbor improvements. Of this the western half of the United States will get, judging by previous records, a couple of million or so. Whatever are her possibilities, it is not contended that the West is as important or influential as the East. She has not yet the dense population; but why should she not get at least a fair share of this great appropriation? Why should she not get a fourth of it, to be applied to the building of great storage reservoirs to be filled with flood waters for use in irrigation, under a system of internal improvements?

The Government is spending large sums in aiding in the development of foreign trade and the opening of foreign markets for American manufacturers. It is believed that we should push our goods into every market of the world and sell them. The belief is also gaining ground that the Government should also develop its home market for American products and manufactures. This it could do by reclaiming the 75,000,000 acres of western arid land and settling them with thousands of industrious home builders. Eastern merchants are more than willing to see such an undertaking. The West should take the initiative.

Washington, D. C.

GUY E. MITCHELL.

## FRUIT MARKETING.

### The Marketing of California Fresh Fruit in the East.

By WM. B. GESTER of Placer County, at this week's Fruit Growers' Convention.

At the annual convention held at Fresno two years ago this month, having just returned from the East, where I had spent the summer looking after certain deciduous fruit interests, I gave you, at the request of the president, a narrative of some of my experiences and the results of my observations. Since that meeting I have spent two-thirds of the time in the East, not as a looker-on only, but interested in the details of a fruit business, and so deeply interested at that time that I found it impossible to attend the San Jose Convention last year. I am requested to again speak to you to say things which, as a fellow fruit grower, I may think of interest and profit to you. The most important business in which the fruit grower of California can at present interest himself is that of combination. This subject is in the best of hands, is made a specialty for this convention to discuss, and will have no part in this short paper, which will deal with a few matters of comparatively minor importance.

**OUR FRUITS AT THE EAST.**—As usual, my topic is that of fresh fruit shipments to the East, the most precarious and least profitable branch of the great fruit industry of California. The principal reason for this condition and result is very obvious. It is the isolation of California. In the old Spanish romance from which the State derives its name California is described as a distant island, and such it virtually is, separated by thousands of miles of what must always be a sparsely settled territory from the boundaries of that portion of our country which constitutes our market. As a matter of fact, at the present time the bulk of our product must travel more than twice this distance to reach consumption; but it is this thousand miles of mountain and desert plain, this worse than deep, blue ocean, that forever fixes our isolation. Were it water, it would be better for us, for then we should have a highway open for competition and water rates of transportation comparable with those of the great lakes between Duluth and Buffalo.

**FREIGHT RATES.**—The question of transportation rates on fresh fruit to Eastern markets has been pretty thoroughly discussed for years, and conditions

are well known—the growers' condition to the transportation companies, and vice versa. The fact that the volume of shipment holds up is proof that the rate is no more than the traffic will bear. When fresh fruit shipments cease the rate will regulate itself. Until then the hopes for lower rates must rest upon a new transportation line, honestly and economically built, honestly capitalized and out for business. During the season last past the loss to growers and shippers occasioned by the unreasonable length of time occupied by fresh fruit in transit to destination can hardly be measured. It amounts to thousands of dollars, a loss hardly borne, and inflicted by the transportation companies probably not with malice, but certainly without cause or reason. This is a grievance that should be more readily cured than the one of exorbitant rates. It does not require reorganization, nor another competing line, nor government ownership, to restore a time card. In decent fairness the railroad companies should do this, and without any great amount of knee bending on the part of the growers and shippers of California. A simple request on the part of this convention, through its committee on transportation, should be sufficient.

**REFRIGERATION.**—Closely related to these matters is that of the cost of refrigeration. At one time there was hope that cheaply manufactured liquid air would offer a solution to the question. There seems to be no good foundation for the hope. The refrigerating power of liquid air is not great as compared with that of ice. For the present we are in the hands—and, in a measure, at the mercy—of the refrigerating car lines. Their rates are very much too high. Their bills against the railroad companies are believed to be quite high enough to pay all their expenses, leaving nearly all of the refrigeration rate as clear profit. This is a popular belief, and here purposely given to draw, if possible, an authoritative denial from the lines. On the Eastern railroads there are many car lines in the refrigerating business. In time some of them will find a way to get a foothold in California, especially if they are properly assisted by those most interested, namely, ourselves. I still think, as I did a year ago, that Mr. R. D. Stephens' idea was a thoroughly good one. I believe a refrigerator line owned by ourselves would more completely fill the requirements, but we are apparently not quite ready. We are not yet sufficiently organized. We lack the courage of conscious strength, the confidence to take a long step, even though it tend towards freedom. If we delay long enough, perhaps the railroad companies out of California will take the matter up and furnish refrigerators of their own, as is done elsewhere, at a nominal cost. This, perhaps, would be the best solution of the problem. How to bring it about I do not even suggest, but leave the matter in the hands of the very capable committee on transportation and freight rates. I think it would be wise, at any rate, to ascertain definitely from the railroad companies whether we may hope for such an arrangement. If we may not, then the agitation for a growers' refrigerator line should not cease until the line is a fact. The day of systematic organization is here. With the organization will come the strength and the confidence that strength engenders. The raisin men are as one. The prune growers are united, the orange growers have a strong combination. The deciduous fruit growers will have their day, and then the orange and the deciduous fruit men will own their car line. It is in the air.

**MISTAKE IN POOR FRUIT.**—If I had had the pleasure of speaking to you at San Jose last year, I should have spoken very freely in regard to the disastrous policy of sending to the far East such miserable deciduous fruit as went by the train load during that year. The first shipments of the year were fair in quality and the market was in a very satisfactory condition, then with the advent of Crawford peaches there began coming carload after carload of uncolored, fur-clothed little things, marked California peaches, that went from 110 to 140 to the standard box. They knocked the market flat and it never recovered. Hasn't recovered yet. It was a wickedly criminal thing to do, to send such stuff two or three thousand miles, in some cases to markets that had had supplies of good fruit; in others, to markets that, because of the scarcity of fruit in the East that year, took California fruit for the first time and the last.

**GOOD FRUIT WILL PAY.**—The truth is that, unless your fruit when it reaches the East is first-class (in appearance, at least), it had better have remained where it grew. The qualities that recommend it principally are two—appearance and ability to "stand up," or keep. In appearance it must equal the bulk of the Eastern fruit, and let me whisper right here that that makes the standard very high, indeed. The best fruit from Georgia, from Missouri, from Michigan, from New York, is exceedingly handsome. The Missouri Elberta peach at its best is as handsome a peach as grows in the State of California. We are not alone in the fruit business by any means. The handsomest apples I ever saw grow near Grand Junction in Colorado. Years ago New York produced nothing better than a damson, or green gage plum. They have changed all that, and now market plums and prunes that hold their own except with our very best. One little district, extending along Lake Erie

for about 50 miles, annually ships 5000 carloads of grapes. This is not said to discourage, but to warn. With our great disadvantage of distance, we are up against a very keen competition, for the Eastern grower permits his fruit to more nearly mature on the tree than we dare to attempt. On the market the fruit will average better than ours in flavor. Do not misunderstand me. No fruit there is better than such of ours as is permitted to acquire perfection on the tree. Theirs is better flavored, because ours is necessarily picked hard, and, comparatively speaking, not matured. As against this advantage which they have over us, we can, and do, set up the one of keeping quality. After its long journey, our best fruit will stand up two or three times as long as their best. Hence, it is a favorite with the retail dealers, and such consumers as purchase by the lot. One other advantage is ours temporarily: that is, we pack fruit better than it is packed anywhere in the United States. Our average pack is better than it was five years ago, infinitely better than it was ten years ago. This refers to the package, wrapping, etc. Even the little peaches of last year were generally well and neatly packed. How long it will be before Eastern growers modify their methods remains to be seen.

**TASTE OF TURPENTINE.**—One more suggestion in regard to package. Apricots and peaches, most frequently the latter, very often become tainted with the resin of the sugar pine box. I have heard consumers in nearly every State east of the Missouri river complain of the turpentine flavor of our peaches. I have tasted the flavor very frequently myself, and think it should be guarded against by using only selected shooks; for peaches especially. No material makes up quite so handsomely as the sugar pine, but inasmuch as it injures the fruit, it should not be used. I suggest that a lesson might be taken from our butter packers, who use white spruce. Consumers taste the peculiar resin flavor, and whether they learn, or whether they do not, that it is not natural but an acquired taint, it makes little difference, they are prejudiced against the fruit. I have never noticed this flavor in fruit sent in ventilator cars, even in sugar pine boxes, and draw the conclusion that the confinement and dampness of the refrigerator car combine to produce the effect.

**EXPLOITATION AT THE EAST.**—We frequently used to see articles in our newspapers bemoaning the fact that the Eastern markets had not been sufficiently exploited in the interest of fresh fruit. Whatever may have been the case years ago, it is not true now. Earl's men, Porter's men, large and responsible houses acting as district agents of others of our shippers, and many brokers doing business on private account, cover the ground very thoroughly. In the line of citrus fruits, the Southern California Fruit Exchange also has the Eastern territory covered by a very competent corps of representatives. That our fruit sells for no more, and in no greater quantity, is not for lack of wideawake, enterprising men to place it. There may be good-sized towns that do not take car lots of our products, but it is not because they have not been worked. It is because of local supply, or because they are in close communication with an auction market, or even another town, not an auction point, but having a firmly established car lot trade. After an exhaustive study of the situation during the past three years, I do not look for any rapid increase in our yearly total sales. I do look for keener competition on the part of Eastern fruit growers all the time, and I look for occasional spurts of trade arising from crop failures in the East. I therefore believe it is good policy not to plant for the fresh fruit shipping trade, but rather for processing, for drying, canning, or otherwise preserving. Where there is a question arising of shipping fresh, or curing a crop, I should always acknowledge myself in favor of the latter. In this line there is no doubt of our advantage over the Eastern fruit grower, no matter where he lives. We can put up a better cured or preserved product at less expense than he dreams of. With proper organization among the dried fruit men, there should always be a profit, greater or less, for those in the organization. For the fresh fruit shipper there never is, and never will be, any such certainty, because of possible Eastern competition, but the chances in his favor will be much greater the more nearly he succeeds in reducing the cost of marketing to a minimum, and the more studiously careful he is in sending only such fruit to the East as will sell in competition with the fine product of a lot of local growers, who are learning year by year, and are so very evidently improving the quality of their goods from season to season.

[In conclusion, Mr. Gester gave an interesting account of the development of fruit growing in Mexico by American capital and enterprise, and held that we shall have to meet competition from that direction.—Ed.]

The Chicago stock yards received 226,683 carloads of live stock the first ten months of 1900, being an even 5200 more cars than were received the same period of 1899. The receipts for October were 3522 cars above the average, being the largest number in any month for five years.



## Agricultural Review.

### ALAMEDA.

**ORCHARD PROPERTY SOLD.**—Oakland Enquirer, Nov. 30: Brady W. Marlin, son of the former supervisor of this county, has sold for \$30,000 cash to Stenzel Bros., who own adjacent properties, 104 acres of orchard land at San Lorenzo. The largest acreage crop of tomatoes in the history of the State was grown on the Marlin property last year.

**PRUNING VINEYARDS.**—Livermore Herald, Dec. 1: Pruning has begun in several vineyards in the valley and will be general in another week. On account of the absence of heavy frosts, the foliage is clinging to the vines much later than usual this year.

**SHEEP BEING MOVED TO FOOTHILLS.**—Livermore Herald, Dec. 1: Sheep men are beginning to move their flocks onto the hill ranges, having made the discovery that feed is scarce, notwithstanding the abundant rains, because of the fires which swept the country last fall.

### BUTTE.

**OLIVE PICKLING.**—Oroville Register, Nov. 29: The curing of ripe olives for table use in this part of Butte is rapidly increasing in importance. The Ehman Olive Co. are curing large quantities of fine olives, which are being sent to all parts of the United States. At the Mt. Ida olive farm, owned by Hon. John C. Gray, about 4000 gallons will be cured this fall. In Thermalito B. F. Reppert, who has charge of Rancho Golden Grove, will pickle perhaps 2000 gallons. J. C. Hussey and J. A. Cleveland of Thermalito will each pickle several hundred gallons. The Ekman-Stow Co. of this town will put up a large quantity of olives. J. G. Curtis of Pontz will pickle at least 500 gallons. In Palermo it is estimated there will be 25,000 gallons pickled by the Palermo Nursery & Citrus Association, Gordon & Robb, and by others. In Oroville there will be fully 2000 gallons put up by those not named above, so it will be seen the quantity of pickled olives is rapidly growing.

**BIDWELL LAND IN DEMAND.**—Chico Record: Each mail is now bringing B. Cusick, the agent for the Bidwell lands, a large number of inquiries from Eastern people. From five to twenty letters are received daily in which the statement is made: "I am thinking of coming to California to reside."

**MANY HOGS KILLED.**—Oroville Mercury: William Ank of Moorstown says a strange creature of that vicinity feasts upon the fat hogs of the farmers. It makes a track similar to a bear, but shorter, and the imprint shows the impression of five toes. Many hogs have been killed by it.

### COLUSA.

**FOR A COLONY.**—Colusa Sun: There is a rumor that the Grimes homo has been purchased by San Francisco parties for the purpose of dividing into small homesteads. This is a magnificent body of land and it is hoped the rumor is founded on fact.

### EL DORADO.

**MONSTER MUSHROOM.**—Sacramento Record-Union: El Dorado county seems to carry off the honors in the way of edible fungi. J. L. Maude, commissioner of the department of highways, is the recipient from Marco Varozza, commissioner of the Tahoe road, of a mushroom weighing eight pounds six ounces. It is 14 inches in diameter and 42 inches in circumference.

### HUMBOLDT.

**NEW WOOLEN MILL.**—Arcata Union, Dec. 1: A woolen mill in Eureka is now an accomplished fact. Although the mill is not yet ready to operate in its entirety, the machinery for the preliminary work was started up this week and already yarn is being made. On Monday the weaving department will commence operations. The finishing machinery is not yet in place, but it is all on the ground and is being set up as rapidly as possible. The plant is housed in a series of buildings which cost \$10,000. Permanent employment will be given fifty people, whose labor it is estimated will annually consume about 400,000 pounds of wool in the crude state and produce a finished product of the estimated value of \$175,000 annually.

### KINGS.

**GRAIN CROP LOOKING WELL.**—Hanford Sentinel, Nov. 29: The Robinson brothers, who have sown 530 acres to wheat down on the east side of the old Tulare lake bottom, returned from there this morning. They report the rain a great thing in that section, and the grain is coming up in splendid condition. Mr. Robinson said that F. E. Howe has 600 acres, all coming nicely, and H. C. Tandy has 320 acres. Bardon brothers have 2000 acres planted. R. E. Hyde has forty

acres of alfalfa, doing well. All the farmers who have their crop sown are jubilant at the prospect.

**CATTLE IN ABUNDANCE.**—Hanford Sentinel, Nov. 29: The influx of cattle which has been going on for the past few months has suddenly ceased since the recent rains. The country has been pretty thoroughly filled with live stock and the result is that cattle are cheaper here than in most outside districts, which have been drained of stock on account of drouth. Arizona will soon be covered with the hest of feed and cattlemen there have realized the fact and have raised very materially in the price of their stock.

**TULARE LAKE BED IN GRAIN.**—Hanford Journal, Nov. 30: A considerable acreage is already seeded and the grain is up and looking fine in the Buena Vista reclamation district. The alfalfa sown is also up and growing thriftily. The prospects are so encouraging that Mr. Pryer, J. D. Hefton, Dr. Bond and his sons, Delbert Fowler and others are preparing to at once begin grain sowing. The old Tulare lake section bids fair to be the hanner wheat section of Kings county this year.

### LOS ANGELES.

**A FINE ORANGE GROVE CHANGES HANDS.**—Pasadena Star, Nov. 28: Stephen Green has bought of Francis Ford a twenty-acre tract of land lying about 1 mile northwest of the town of Covina, in this county, for \$18,000. The tract is nicely improved, having a good dwelling house and all needed outbuildings upon it, and is set out in Washington Navel orange trees, which are in a good state of bearing. Fifty shares of the capital stock of the Covina Irrigating Company pass with the land as an appurtenance.

**THE THOMAS EARLY ORANGE GROVE SOLD.**—Pasadena Star, Nov. 28: Thomas Early has sold his fine orange grove on Hill avenue, consisting of eight acres of Washington Navel nine years old, to Edward F. DeBevedon of New York, the consideration approximating \$12,000.

### ORANGE.

**DAMAGE TO CELERY CROP.**—Anaheim Gazette, Nov. 29: The damage to the celery crop was vastly overestimated. The Keystone Produce Company will be the heaviest loser. This company made great advances on the crop, and had contracted for about 800 acres. Much of the celery was covered up with mud and sand. Men were put to work cutting it out as fast as possible. Part of the crop will be saved.

**NOVEL METHOD OF FINDING THE PRICE OF WALNUTS.**—Santa Ana Blade: Elvin Greenleaf, a son of Dr. Greenleaf of this city, is a rancher and a school boy, and is business from the word go. He is just a little bit inquisitive, too, and to satisfy this characteristic of the average small boy he adopted a novel method of finding out what consumers had to pay for walnuts raised by his father last year. While the nuts were being sacked for shipment he picked out several of the largest he could find, and, taking the kernels out, enclosed in the shells a note giving his name and address and telling how the nuts were grown and cured, and asking that the finder of the note address him, stating what he paid for the nuts. He received several answers to the notes, one, coming from a party in the East, informing Elvin that the nuts sold for 20 cents per pound. As they were sold here at about 8 cents, the figure quoted enlightened the young man as to the difference between the price paid the grower and that paid by the consumer.

### SAN BERNARDINO.

**ORANGES GOING FORWARD IN GREAT QUANTITY.**—Redlands Facts, Nov. 27: Oranges are in demand in the East and the demand has taken the pickers into the orchards as soon as they could get upon the ground. Picking was begun in earnest yesterday and four cars of fruit were forwarded from Redlands, one by Fay Fruit Company, one by Stearns, Brown & Co., and two by A. Gregory. Nearly all the packers report more orders than ever before and the demand is increasing. Reports from cars already forwarded show that they have given better satisfaction than usual and duplicates of the cars received in the East are wanted as soon as possible. The fruit is coloring rapidly and some of it looks quite attractive as it comes from the brushes. Some of the greenest brought in a week ago were packed and left in the house. Now the oranges are of fine color, and much improved in quality, showing that there is great improvement in shipped fruit while it is crossing the continent.

### SANTA BARBARA.

**REVIVAL OF DAIRY INDUSTRY.**—Lompoc Record, Dec. 1: There is a great revival of the dairying industry in this vicinity. Every available section producing native grasses, or that can be at all utilized, is finding renters at a price that will justify entering or continuing the

business. The prospect of a good season, or a series of them after a period of drouths that has forced stock from the ranges, is encouraging dairymen to stock up and go hopefully forward.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian, Nov. 29: Red Pearmaines are slow sellers this year.—Eastern and foreign apple shipments for the past two weeks were 62 cars; for the season, 482 cars.—The big Bellefleur was given a thorough test by packers this season, and it will not do. It softened in quick time, and was badly spotted beneath the skin. The trade prefers the reliable four-tier Bellefleurs.—The Missouri Pippins are of excellent quality this year, and they are selling freely. A number of cars of Missouri have been sent East. They have run to uniform size this season and the percentage of loss is small. The Missouri Pippin is a good cooking apple.

### SAN DIEGO.

**SAN DIEGO FRUIT EXCHANGE.**—Escondido Times: At the annual meeting of the stockholders of the San Diego Fruit Exchange the following named gentlemen were elected directors for the ensuing year: P. S. Berger, F. B. Meriam and S. W. Haines of Chula Vista; J. D. Hammonds and J. A. Hanny of Spring Valley; P. W. Beck of Bonita; Dr. Johnson of El Cajon; J. R. Stearns of Tia Juana and G. P. Hall of San Diego. The board of directors elected was P. S. Berger, president; F. B. Merriam, secretary and general manager. A large membership is looked for during the year.

**BY-PRODUCTS OF THE LEMON.**—San Diego Union: One of the prettiest displays ever placed in the Chamber of Commerce rooms was that which was installed by the California Citrus Products Company of National City, consisting of bottles of citric acid in crystals and granules, oil made from lemons, oil made from oranges, and oil made from tangerines; also tango and orange syrup, and pomelo, the new drink. The most novel of the new features of the exhibit was orange and lemon pie fillings, put up in bottles, all ready to pour into pie crusts, in addition to which there were four grades of the lemon extract and two grades of orange extract.

### SONOMA.

**HENS GUARANTEED TO LAY.**—Santa Rosa Press-Democrat: A crate of fine White Leghorn fowls came to the local express office the other day from the East, consigned to C. F. Beerman, who resides near the petrified forest. Mr. Beerman has a splendid lot of chickens on his place, but wished to add to them, and so sent for the aforesaid. Mr. Beerman says these White Leghorn fowls are "warranted" to lay 250 eggs apiece during the season. If what is promised of the fowls proves true, it is likely there will be a great demand for them. It is safe to say that these are the first fowls warranted to lay a specified number of eggs that have been introduced into Sonoma county.

### STANISLAUS.

**NEW CREAMERY AND SKIMMING PLANTS PURCHASED.**—Modesto Herald, Nov. 29: A complete plant for the Modesto creamery and a plant for the skimming station have been purchased by a duly authorized committee, consisting of C. R. Tillson, H. G. Turner and J. H. Severin, the latter consulting expert and superintendent. The main plant will have a capacity of 1000 pounds of butter daily, to be doubled and even trebled by the addition of churns.

**SOME LARGE ALFALFA TRACTS.**—Modesto Herald, Nov. 29: H. F. Geer of Turlock has commenced checking for perhaps 160 acres of alfalfa, and H. S. Crane is checking a 100-acre tract. A. B. Shoemaker will shortly commence seeding 160 acres checked in the spring, and Dr. Evans will seed 60 acres checked lately. Scrapers are in evidence throughout the district and the aggregate acreage planted to alfalfa this winter and next spring will be considerable. I. W. Updike may experiment with contour furrow ditches for alfalfa, a method followed exclusively in Colorado and being practiced to some extent new about Hanford and Bakersfield. Messrs. Moore, Jones, Brush and McCumber are checking or have checked 20 acres or thereabouts each for alfalfa, and there are others in the same vicinity of whose operations our information is indefinite. Bert Hatch is checking for 60 acres of alfalfa near Ceres. Major Whitmore is putting in 15 acres, checked some time ago, and C. N. Whitmore is checking 25 or 30 acres.

### SUTTER.

**OLIVE PICKLING PLANT.**—Sutter Independent: Munger Brothers have purchased the olive pickling machinery of J. J. Pratt and have commenced the pickling of ripe and green olives. They intend to do a wholesale business only. They re-

cently purchased the entire crop of the Olive Hill Colony, in the Yuba foothills.

**DEMAND FOR GRAPE ROOTS.**—Sutter County Farmer, November 30: The demand for grape roots this season has been far beyond the supply and there will no doubt be quite an acreage planted to vineyards in this section for several seasons to come. Last year O. A. Wilbur of this place set out 125,000 cuttings of the Thompson Seedless variety, and has sold them at from \$12 to \$22.50 per thousand, and could have sold several times that number. Next season he expects to set out over half a million cuttings to supply the demand. The land on which the cuttings will be set out borders on the slough and is highly adapted to the growth of nursery stock.

**WOODLAND CREAMERY ANNUAL MEETING.**—Sutter County Farmer, November 30: The annual meeting of the Woodland creamery stockholders was held last Saturday and the following officers chosen: H. E. Cohl, president; R. W. Browning, vice-president, and H. S. Joselyn, secretary. The yearly statement showed the following items: Total amount butter manufactured, 257,876 lbs.; butter consumed by patrons, 13,039 lbs.; butter sold, 244,837 lbs.; average price for twelve months, 22 cents; cash received for butter sold, \$53,864.02; cash paid to patrons, \$45,396.86.

**MONEY IN FIGS.**—Sutter County Farmer: While the price of figs this year was somewhat lower than formerly, still the fig growers realized a good profit. From the orchard of M. E. Sanborn, in the Cooper tract, the gross returns were \$1152.41 and the total expenses for the year, including taxes, pruning, cultivation, gathering crop, drying and marketing same, was \$299.29, leaving a net balance of \$853.12 for the orchard of less than eight acres.

### TULARE.

**ORANGE PLANTING.**—Tulare Register: Land south and east of Plano is being bought up in small tracts for planting to oranges. Time is coming when orange groves will cover all fit land along the Tule, and probably some that is not well adapted to citrus fruits. It is not always easy to determine the best localities, as land passed by for years as not good orange land in this State was planted later and has done well. In the Riverside district the citrus belt has extended beyond what the pioneers in the industry considered safe. So it may be in Tulare county. In the foothill region the planting seems to be guided by the water supply rather than by shades of difference in the land, and water is available wherever pumping can be done.

**A GOOD ALFALFA SECTION.**—Tulare County Times, Nov. 29: Monson has some very productive country surrounding it, on which alfalfa is grown without irrigation. Water is found inside of 4 feet from the surface and the alfalfa roots reach down to it and the shoots are thus kept green and thriving throughout the year. Crops of hay are harvested from three to five times a year, and there are fields from which crops of hay were harvested only a month ago that will make a rank growth and be ready for the mower again before Christmas. The farmers owning these alfalfa fields are gradually going into the dairy business, and now supply a skimming station with enough milk to make the business profitable.

### ARIZONA.

**SALE OF DATES.**—Phoenix Enterprise: To Mrs. S. D. Lount, of this city, belongs the distinction of raising the first dates ever produced in the United States, which were sold to a customer in Phoenix for \$8. The crop from one tree this year amounts to 200 pounds, while that from the two trees at the experimental station amounts to over 600 pounds, which were packed in pound boxes and found a ready sale at 25 cents a pound, the entire crop being almost consumed. [These were not, of course, the first dates grown in the United States, for they have been grown in California for the last twenty years and in Arizona for the last five years. They may have been the first ever sold for \$8.—EDS.]

## Horse Owners! Use

GOMBAULT'S

## Caustic Balsam

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blisterbites from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blister. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.





## THE HOME CIRCLE.

### The Day of Human Life.

Written for the PACIFIC RURAL PRESS.

As from the shades of night is born each day,  
So from pre-natal night starts on its way—  
To meet with pain and pleasure, care and strife—  
This wondrous complex thing called human life.

Its morning, measured by a few short years  
Of fleeting pleasures, trials, sighs and tears—  
Is quickly left behind, and all too soon  
Life's speeding day has reached its hour of noon.

Scarce pauses man at life's meridian hour  
E'er he perceives the evening shadows lower;  
The afternoon is short,—no standing still  
When journeying on Time's highway down the hill.

Then come his twilight years—approaching night  
And gathering gloom announce life's fading light;  
Its day at last is done,—content to reach its close,  
Man sinks to Nature's arms—from warfare to repose.

San Francisco. J. R. RUCKSTELL.

### Only a Skirmish.

"Ready? I was not going to wait much longer."

"Sorry! I shall be later than you will. I have half a mile to go after I have dropped you, and I know the Vennekers expect me to be punctual."

The porter at Blessingham Chambers had a hansom at the door, and they got into it quickly and drove off—two men who had lived together for ten years, and knew each other well enough to do without conversation on trivial topics. After a minute or two, however, one of them became unusually talkative. "Saw an old flame of yours to-day, Dick."

"So did I."  
"The deuce you did! The Vennekers used to know her, didn't they? I don't suppose they can raise a dinner party in the slack season without asking all their friends. You'll meet her there to-night."

"I shall."  
"Dick Templar," said his friend, "you're a secretive devil! Two years ago you worried me with all your lamentations over the girl till I got sick of her name. Each time you proposed to her you told me what you said and what she said when she refused you; and now she comes to London as the wife of the other fellow, and you slip off to tea with her, instead of coming to the club to play whist—you know that is where you were, so don't deny it!—and you say not a blessed word about it. Not even to me. May I ask what is the difference between your feelings for Miss Rose Casterton and your feelings for Mrs.—Mrs. Rose?"

"O'Brien; husband's a captain in an Irish regiment. He'd need to be with such a name!" grunted Dick Templar. "In Africa."

"Phew! Poor devil! What makes the difference?—for you are different."

"Don't be a goat!" answered Dick. "I am not different. There was nothing to tell, that's all. I've called on her twice, and she remembered that she liked me, rather, and—she is glad to see some one she knows and can talk to—she quite forgets how I loved her. She will never understand how I love her still—I don't mind telling you all this, old chap—all she talks and thinks about is her husband. It's what 'Pat' says and what 'Pat' does and what 'Pat' thinks about everything, and she looks at his photograph all the time if you can't get her with her back to it. She's safe enough and so am I, for that matter, I feel just the same—only different, you know."

"Time heals."  
"Time makes the wound fester. I love her more than ever. I hate meeting her, but I'm so fond of her I can't even hate her husband when she talks

to me about him; I believe I'd bring him back to her if I could, just to make her happier."

"Poor old Dick! What a good chap you are. Here's my dinner waiting for me and a brougham in front of the door, so I'm not late."

He got out and Dick Templar opened the little trapdoor in the roof and shouted to the cabman to drive fast.

The Vennekers live somewhere north of the Marylebone road in a quiet terrace of big houses. There was no carriage at their door. A hansom was the only vehicle in the terrace, driving slowly off, with the man in the dickey examining the fare that had just been paid him as if he were dissatisfied with the quality as well as the quantity of the coin. Dick wondered if Mrs. O'Brien had driven alone in the cab in front of him all the way from Elbury street, paid his fare and jumped out.

A small boy had strayed up with a bundle of papers, but trade was slack, and he dashed forward, apparently with the forlorn hope that something might be gained by helping an able-bodied gentleman late for dinner to alight from a hansom cab. Dick Templar pushed him on one side, ran up stairs and rang the bell.

The footman who should have opened the door must have been carrying the soup for no one came for fully a minute. Dick tapped his foot impatiently on the white doorstep and scowled at the small boy half hidden behind an orange contents bill.

"Killed and Wounded at Battersburg, Official List," was the most prominent item of news promised by the bill.

Dick tried in vain to remember what it was that had happened some days before at Battersburg—whether the boys had captured a convoy or saved their own guns and decamped, and, as no one came to the door, he held out a penny to the small boy and rang again.

The "Official List" was plain enough in the Stop Press telegrams; Dick had found it before the footman opened the door.

"Yes, sir?" said the man aloud, to attract the attention of the gentleman. Dick was keeping a dinner party of fully twenty people waiting in the drawing room while he read the newspaper.

"Officer killed: Captain G. C. O'Brien, Dublin Fusiliers." That was what he had read; one or two other names followed, but he did not see them. Mechanically he folded the paper and thrust it deep into the pocket of the overcoat which the footman was taking from him as rapidly as he could.

"You are late, and I have had no one to bring me downstairs!" said a voice that brought Dick to himself with a start. They had resolved to go to dinner without him, and he had been standing in the hall staring at them in a dazed way, almost without acknowledging his host's nod, as they fled by until Mrs. O'Brien came past alone. She slipped her arm into his, and he went in vaguely wondering what it was he had to do, with the widow of a man of forty-eight hours dead prattling beside him about the heat and flowers, twitting him with trivialities as to what might have made him so late, and rallying him on his dullness.

"I suppose it is being married to a soldier," she said "that makes me accustomed to punctuality. Pat is never late for anything."

It was the first time she had mentioned her husband by name that evening, and he caught at the idea like a drowning man at a lifebelt.

"Why are all Irishmen christened Patrick?" he asked, going at the a roundabout way instinctively.

"But they aren't!" she exclaimed. "My husband's name is George. He was christened George Carruthers, only Pat suits him so much better. You will say so when you see him."

Dick could see him in his mind's eye, with a couple of soldiers heaping dry sand over him in a shallow grave, and a firing party returning to camp after their last duty. He even wondered vaguely whether they marched

back with arms reversed, and what arms reversed might precisely mean. He had read of soldiers' funerals in newspapers.

"You really ought to see him," she went on, and, having once got upon the topic, talked of the husband whom she had married six months before, the rest of dinner time, telling her hostess an anecdote of him across the man who sat between them. Her doing so gave Dick an opportunity to think, and possible solutions of the question what was to happen chased one another through his head. She might not see the news till the morning, reading it all by herself, in her lodgings; he had called on her there, and she had told him how lonely and forlorn she felt without "Pat." The Vennekers were almost the only people she knew in London, and they were only friends whom she had known, as girls know married people in London, for a year or two before her engagement. Again, she might read the news in the evening paper, as he had done; it would be better in the morning than with the loneliness of night to follow the blow—all alone at night in those dingy lodgings. Or some one might have seen the telegram and might blurt out the name he had read at any moment during dinner; then there would be a scene in which he, Dick Templar, would be a helpless spectator. Some day she might remember how cheerfully she had spent the evening, laughing and chatting when her husband lay dead, and even find out that he knew all the time. Could he tell her quietly afterwards? He could, of course, drive home with her: probably she would expect him to do so. Should he tell Mrs. Venneker and ask her to break the news? Some people he knew, thought that bad news came more gently dribbled out, perhaps with an accompaniment of phrases importing religious consolation. He thought of how he might best put it, and shivered. His train of thought was interrupted by Mrs. O'Brien speaking to him, eating a late strawberry by tiny mouthfuls as she did so. He hoped his face would show nothing for the present.

"Do you think me horribly frivolous and heartless, dining out and enjoying myself? Do you think I ought to be glum, like—like you?" she asked with a sudden grave look in her eyes. "If I once gave away to all I feel at times I should go mad. The worst battles were fought before he got out there, and I feel—I know—that he must come through all right now. You think the show is practically over, don't you? Every one says so."

She laid her hand on his, or it touched his, perhaps unintentionally, and her face was for a moment so drawn and earnest that he felt no doubt of the reality of her feeling, looking into her eyes and seeing for an instant below the surface. Then the surface closed over again and rippled, and, before he could answer, Mrs. Venneker had signalled and the ladies were filing out of the room.

There was no doubt of the feeling—no doubt of the weight of the blow that was going to fall. Still, the touch of her hand on his had set his pulses throbbing, and he felt that there was a future to think of as well as a present.

Speaking of the matter afterward, Mr. Venneker told his wife that he noticed at the time that Templar punished the port in silence, and that, finding that he could not draw him into the conversation of the other men, he let him alone. The latter part of this was true, for Dick hardly answered coherently when he was spoken to. With regard to the port, he drank three sips, and left the rest standing in the glass when he rose with the others to join the ladies. By that time he had made up his mind that it was of no use to say anything to Mr. Venneker. When they got upstairs, Mrs. O'Brien was singing. It was an Irish song, something with "Pat me darlin'" at intervals, and the usual "acushlas" and "asthores." It had not been in her repertory in the old days, and he heard her say that her husband had taught it to her, when she had finished, and been warmly congratulated on her

performance. But, as she was in the back drawing room by the piano, with several ladies around her, he did not go near her.

"What a row those chaps make! You can hear them three streets off!" said another man to him, and they stepped together on the balcony outside the drawing room window. Dick assented, and suggested shutting the window; it was the front drawing room, that faced the roadway, and some one else was sitting down to the piano, but still she might well hear.

"Horrible boo-hoo! Bloo-hoo slorter payper!" they came along, working opposite sides of the street, and bellowing antiphonally, two ruffians with bundles of evening newspapers and voices like foghorns. A servant bought a paper from one of them three doors off, while the other bellowed; he had enough definite news in his bill to be quite articulate as to the slaughter.

"By George, we'll have one!" said Mr. Venneker, in the room behind them. Dick tried to stop him, but was too late. He had run downstairs to buy one himself, instead of ringing the bell and sending out.

Mrs. O'Brien was coming forward from the back drawing room, standing in a clear space. What must happen flashed through Dick's brain; he saw Mrs. Venneker too much surrounded for him to get near and warn her and get her to help. Mr. Venneker was on the stairs; he would see it first, stop and try to hide the newspaper; then she would snatch it from him, and then—he could see her with his mind's eye at full length in her wedding dress on the parquet floor. He moved forward to be near her as Mr. Venneker came into the room with the newspaper in his hand, and stood glancing through it for the latest news. Dick clenched his teeth, looked, and remained silent. Mr. Venneker was looking at one spot in the paper. He was a red-faced man, and could not be expected to change color. It was coming.

"There's no news," said a clear, tranquil voice. It was Mrs. O'Brien, looking over her shoulder at her host as she moved toward his wife, holding out her hand to say good-night. "I came here straight from the War Office. A cousin of my husband is killed, that is all—Gerald O'Brien."

"I wondered whether he was a relation," said Mr. Venneker, his voice shaking.

Dick was digging his nails into the palms of his hands and teeth into his lips in the effort to hold himself together.

"My husband is Captain George

## CONSUMPTION

is, by no means, the dreadful disease it is thought to be—in the beginning.

The trouble is: you don't know you've got it; you don't believe it; you won't believe it—till you are forced to. Then it is dangerous.

Don't be afraid; but attend to it quick—you can do it yourself, and at home.

Take Scott's emulsion of cod-liver oil, and live carefully every way.

This is sound doctrine, whatever you may think or be told; and, if heeded, will save life.

We'll send you a little to try, if you like.  
SCOTT & BOWNE, 409 Pearl street, New York.



O'Brien, in the Irish Rifles, said Mrs. O'Brien in explanation to a lady near her. "Stupid people used to mix Gerald up with him because of the initials. The cousin's names were Gerald Costigan, I think, and, of course, the regiments are quite different. The Rifles weren't in that show at all, it was only a skirmish; and Pat didn't like Gerald much I know." At all events, Gerald Costigan O'Brien's fate did not affect his cousin's wife. There was less of indifference in her tone as she exclaimed, catching sight of Dick's face, "Mr. Templar, is anything the matter? Are you ill?"

But Dick could stand it no longer. He is a shy, sensitive man—too much so to give the true explanation to any one, much less to every one; and a man who goes into hysterics and is helped from a crowded drawing room, alternately laughing and crying, on the host's shoulder, must explain to a good many if he wants to re-establish his reputation. Dick never tried, and the theory of the port at dessert is accepted now even by Mrs. O'Brien.—Sketch.

#### Gold Brick Artists.

A couple of years since one of the "yellow" papers of New York City published a marvelous story, of how a great scientist had discovered the process whereby he could transmute silver into gold. A whole page was devoted to this marvelous discovery. The name of the scientist was Stephen H. Emmens, and the story was given an air of probability by the fact that this same Emmens possesses degrees from European universities, and has written many books on scientific questions.

The newspaper notice that Emmens got attracted a considerable amount of attention on the part of many people who are always eager to invest sums of money in the expectation of getting large returns. In fact, it was on all fours with the celebrated scheme of the New England clergymen exposed about a year ago for the purpose of extracting gold out of sea water, and by means of which he succeeded in extracting \$700,000 or \$800,000 out of the bank accounts of Yankees who would not have lent \$500 on a piece of real estate, without having a perfect title guaranteed to them. Mr. Emmens formed a company and thousands of dollars have been intrusted to it. Emmens paid dividends of 1% monthly, and a half yearly bonus amounting to 54% per annum of costs all paid out of the principal.

Metropolitan papers have great fun out of the farmers because once in a while one of them is caught by a gold brick game, but as a rule they do not joke in their funny columns about the city folk who are caught on these get-rich-quick plans.

Vinegar and brown paper will heal a bruise or "black eye."

#### The Shiniest Dime.

One little girl had five little dimes,  
She had counted them over a good many times,  
And again and again she had left her play  
To plan how to spend them for Christmas day.

For papa and mama and baby boy  
And grandpa and grandma would all enjoy  
Her little gifts as much as a score  
Of other presents that cost far more.

Four of the dimes were dull and old,  
But one was shining and new, I'm told;  
And once the little girl said to a friend:  
"This new one is almost too pretty to spend."

At last the Christmas shopping was done;  
The dimes were spent, yes, every one;  
And Annette seemed the happiest girl alive  
As she hurried home with her parcels five.

She had a secret for mother's ear.  
"I bought a nice present for papa dear,  
And for grandpa and grandma and baby, too;  
But I spent the shiniest dime for you!"  
—Jessie L. Britton, in December St. Nicholas.

#### Easily Made Christmas Presents.

**MEMORANDUM SLATE.**—This is not an especially decorative present, but one sure to be appreciated by the thorough housewife. Get a medium-sized common slate, gild or enamel the frame, make hole at center, and one near each end of top of frame, hang pencil from former with red baby ribbon, and suspend with No. 3 ribbon of same shade drawn through the other holes and tied together at center. On one side letter top of frame "must do;" on opposite side, "must have;" hang over the kitchen table or in the pantry and jot down work to be done and supplies needed.

**PINCUSHIONS.**—A pincushion is a convenience in nearly every room, and a simple, inconspicuous one that can be hung from the wall is often a more acceptable gift than an elaborate one that must have standing room. Of the former, the bag or bolster-shape is not only good in itself but admits of many simple styles of decoration, and can be made of odds and ends of pretty material. For the bag-shape, make a plain bag 3 inches wide and 6 inches deep; fill with wool wadding, gather top and draw together closely. Make cover deep enough to turn under at top, and leave standing frill of 1 inch above the shirring, and join at center of back. Use plain silk or satin, and ornament the lower part with a section of plain velvet or brocade silk of deeper shade of same color, or some other harmonious one; cut latter to reach diagonally from near the lower left-hand corner of front to 3 or 4 inches above at right side, and to be of equal height at joining seam; blind stitch down the top, and ornament with fancy stitches wrought in silk of a prettily contrasting color; sew bottom in with joining seam, and ornament same with four tassels of the embroidery silk evenly spaced. Shirr top; sew frill of lace, 1½ inches deep, to outside of shirring; add 8-inch loop of No. 1 satin ribbon, shade of embroidery silk, to shirring at center of back; cover shirring with two pieces of ribbon, and tie in full bow at one side of front.

**BOLSTER CUSHION.**—Make foundation also 6x6 inches; fill and gather both ends closely; make ornamental cover a trifle wider and 13 inches long, and fringe to the depth of 1 inch at each end. If made of figured silk, the fringe and ribbon ornament is ample; if of plain silk or velvet, a charming decoration consists of a piece of very narrow satin or velvet ribbon of same or other harmonious color, placed crosswise 2 inches from center each way; blind stitch to position, and fill space 1 inch wide outside of ribbon with spaced French knots of same tint. Shirr ends to fit easily over cushion; sew baby ribbon, same color as embroidery, to shirring at each end and tie in center for suspending; cover shirring with an-

other piece, and tie in full bow and short ends at front.

**SCISSORS GUARD.**—Cut a slit in smaller end of a firm and rather large cork; crochet cover of pretty colored silk, leaving a hole to come over in cork; finish top with shirring and tassel-tipped cord of silk tied in full bow, and use for protecting points of scissors in sewing basket.

A small wooden bottle for holding broken needles is another pretty and useful gift for sewing basket. Gild neck and wooden cork, and cover bottle with dainty silk bag gathered close at bottom, turned under and shirred, with standing frill at top. Tie baby ribbon in full bow with short ends over shirring, and sew loops together.—Katherine B. Johnson in the Country Gentleman.

#### DOMESTIC ECONOMY.

##### Hints to Housekeepers.

Vinegar will brighten copper.

Vinegar and sugar will make a good stove polish.

White summer shawls made of soft wools may be cleansed by rubbing them in several changes of magnesia and flour mixed.

Baisin bread, which is made like ordinary white bread, with the addition of one-half cupful of raisins to a small loaf, is appetizing for Sunday night supper.

To brown a meringue on a pudding or pie, an ordinary fire shovel heated red hot and passed over the surface until the desired color is obtained is as good a regular salamander. Care is required not to allow it to scorch.

No one drops an initial in having marking of personal linen done nowadays. The more the smarter, as the lettering is very small, but is a distinct Roman type. Handkerchiefs are as fine as cobwebs, very small, and only the finest and least conspicuous embroidery permitted for ornamentation in borders or corner pieces.

The best cooks add a tablespoonful of sugar instead of salt to the water in which ears of green corn are boiled. Remove the husks and all of the silk, put the ears into boiling water, cover them with the white inner husks and cook them until the kernels do not taste raw. Too long cooking makes them tough and impairs their flavor. The usual time required is from ten to fifteen minutes. If corn is to be served off the cob, boil the cobs with the corn to obtain all the milk and sweetness.

Fruit juices are indispensable in families where summer drinks and water ices are liked, and are useful in making sauces for puddings. To can these juices mash the fruit and rub it through a sieve. To every pint of the juice and pulp add three cupfuls of sugar. Fill the fruit jars with the mixture, cover them, and place in a kettle with sufficient cold water to about cover them. Bring to a boil half an hour. Then fill the cans full, seal them, and cool them in the water.

In canning a quarter of a teaspoonful of powdered alum to every quart of the

**YOUR** dealer in lamp-chimneys—what does he get for you?

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fruit and juice will keep the syrup clear and the fruit in shape. Only fresh, sound fruit should be used, and it is well to add the sugar an hour or two before cooking. The fruit should be canned as soon as it reaches the boiling point. Tastes differ, but for backberries a quarter of a pound of sugar is usually used for every pound of the berries; for cherries, one-half pound; for plums, three-quarters of a pound; strawberries, a half pound, and for pineapple, three-quarters of a pound. The fruit may be canned without sugar if it is so wanted, as the sugar does not act as a preservative agency. It is safest to cook only enough of the fruit at a time to fill two or at the most three cans. It should be sealed while it is boiling hot. The cans should be thoroughly heated and placed upon a thick wet cloth during the filling process.

**A Few Words** about

## Pain-Killer

A prominent Montreal clergyman, the Rev. James H. Dixon, Rector St. Jude's and Hon. Canon of Christ Church Cathedral, writes:—"Permit me to send you a few lines to strongly recommend PERRY DAVIS' PAIN-KILLER. I have used it with satisfaction for thirty-five years. It is a preparation which deserves full public confidence."

**Pain-Killer** A sure cure for Sore Throat, Coughs, Chills, Cramps, &c.

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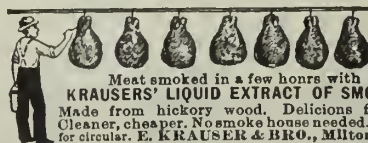
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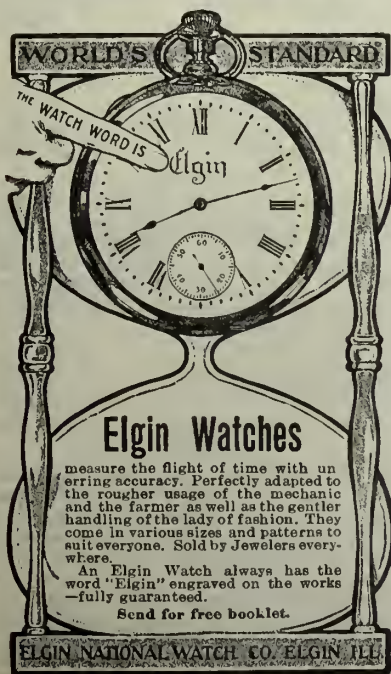


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## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Dec. 5, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

|                | Dec.      | Jan.      |
|----------------|-----------|-----------|
| Wednesday..... | 70% @ 69% | 71% @ 70% |
| Thursday.....  | 70% @ 69% | 71% @ 70% |
| Friday.....    | 70% @ 69% | 71% @ 70% |
| Saturday.....  | 69% @ 70% | 70% @ 71% |
| Monday.....    | 70% @ 70% | 70% @ 71% |
| Tuesday.....   | 70% @ 71% | 70% @ 70% |

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

|                | Dec.     | Mar.    |
|----------------|----------|---------|
| Wednesday..... | 5s 10% d | 6s 0% d |
| Thursday.....  | 5s 10% d | 6s 0% d |
| Friday.....    | 5s 10% d | 6s 0% d |
| Saturday.....  | 5s 10% d | 6s 0% d |
| Monday.....    | 5s 11% d | 6s 0% d |
| Tuesday.....   | 5s 11% d | 6s 0% d |

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

|                | Dec.        | May.            |
|----------------|-------------|-----------------|
| Thursday.....  | *—@—        | —@—             |
| Friday.....    | 95% @ 95    | 1 03% @ 1 03    |
| Saturday.....  | 95% @ 95% d | 1 03% @ 1 03% d |
| Monday.....    | —@—         | 1 04 @ 1 04     |
| Tuesday.....   | 97% @ —     | 1 04% @ 1 05% d |
| Wednesday..... | —@—         | 1 06% @ 1 05% d |

## \*Holiday.

## WHEAT.

There was not much trading in wheat in the open market the past week, but absence of firmness was not so pronounced as previously noted. Shippers took advantage of the opportunity to secure wheat on December contracts at low figures. Knowing there were no other parties willing or prepared to take deliveries of December wheat, exporters offered to sell in order to crowd the price down, and also gave notice of delivery on a few contracts, feeling confident that such action would depress values and that they, the shippers, would not find it necessary to surrender any wheat, believing that the longs would surrender their contracts at best figures obtainable, even if the figures were low and incurred a loss to holders, rather than take wheat in 100-ton lots and pay cash for same. The speculative or option market steadily works in favor of the shipping or buying interest. If it operated in the opposite direction exporters and their allies would soon see that the system was done away with. In November ten cargoes of wheat were cleared from this port, which in connection with minor shipments aggregated 32,150 tons, value, \$663,500. This is about 1,000 tons more than the shipments for October, and is the heaviest for any single month the current season. The United States visible supply, east of the Rockies, was given at 62,174,000 bushels, showing a decrease for the week of 83,000 bushels. The market at close was higher for options, and spot wheat inclined against buyers, but inquiry was light.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

December, 1900, delivery, 95% @ 97% c.  
May, 1901, delivery, \$1.03% @ 1.06%.  
Wednesday, at regular noon session of Call Board, December, 1900, wheat sold at —@—c.; May, 1901, \$1.06% @ 1.05%.

|                                     |                 |
|-------------------------------------|-----------------|
| California Milling.....             | \$1 02% @ 1 07% |
| Cal. No. 1 shipping, alongside..... | 97% @ 1 00      |
| Oregon Valley.....                  | 97% @ 1 00      |
| Washington Blue Stem.....           | 1 00 @ 1 05     |
| Washington Club.....                | 97% @ 1 02% d   |
| Off qualities wheat.....            | 92% @ 95        |

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

|                      | 1899-1900.        | 1900-01.          |
|----------------------|-------------------|-------------------|
| Liv. quotations..... | 6s 2d @ 6s 2% d   | 6s 2% d @ 6s 3% d |
| Freight rates.....   | 35 @ 36% s        | 40 @ — s          |
| Local market.....    | \$0 97% @ 1 01% d | 98% @ 1 01% d     |

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## LOCAL STOCKS OF GRAIN.

Stocks of grain in Call Board warehouses on Dec. 1st and Nov. 1st:

| Tons—       | Dec. 1st. | Nov. 1st. |
|-------------|-----------|-----------|
| Wheat.....  | *185,887  | 203,779   |
| Barley..... | 173,209   | 81,284    |
| Oats.....   | 5,332     | 5,457     |
| Corn.....   | 84        | 112       |

\*Including 122,425 tons at Port Costa, 62,807 tons at Stockton.

†Including 48,621 tons at Port Costa, 14,240 tons at Stockton.

Stocks of wheat in Call Board warehouses on 1st inst. show a decrease of 17,892 tons for the month of November. A year ago there were 236,004 tons wheat in Call Board warehouses.

## FLOUR.

There is no improvement to record in the condition of this market. Values show little actual change, although there was an official announcement of a cut of 25c per barrel by the local combine, these figures having previously gone into effect. Transfers at full current rates are the exception. Local millers continue to have, as for some time past, the decided advantage over their outside competitors, owing to the fact that wheat is cheaper here than in most of the outside districts which ordinarily forward flour to this center.

|                                |              |
|--------------------------------|--------------|
| Superfine, lower grades.....   | 82 25 @ 2 40 |
| Superfine, good to choice..... | 2 50 @ 2 75  |
| Country grades, extras.....    | 3 00 @ 3 25  |
| Choice and extra choice.....   | 3 25 @ 3 50  |
| Fancy brands, jobbing.....     | 3 50 @ 3 65  |
| Oregon, Bakers' extra.....     | 2 75 @ 3 15  |
| Washington, Bakers' extra..... | 2 75 @ 3 25  |

## BARLEY.

Trading in this cereal have been of a slow order most of the time since last review, but the general condition of the market has been more favorable to the selling interest than previously noted. Transfers effected were mainly of Feed descriptions, there being little if any other sort offering at present. While there is no active inquiry for high grade or Brewing barley, such is in comparatively light stock and is being in the main very steadily held, buyers finding it necessary as a rule to pay full current rates. Business in barley futures was of light volume but at a higher range of prices.

|                                 |               |
|---------------------------------|---------------|
| Feed, No. 1 to choice.....      | 75 @ 77% d    |
| Feed, fair to good.....         | 70 @ 72% d    |
| Brewing, No. 1 to choice.....   | 80 @ 85       |
| Chevalier, No. 1 to choice..... | 97% @ 1 02% d |
| Chevalier, No. 2.....           | 85 @ 90       |
| Chevalier, poor.....            | 70 @ 75       |

## OATS.

The market has shown much the same firm tone as for some weeks preceding, especially for choice to select qualities. High grade milling oats are so scarce as to be hardly quotable. Trading has been largely in Red oats, these being in more liberal supply than any other variety. Desirable lots for seed purposes have been commanding stiff figures.

|                               |                 |
|-------------------------------|-----------------|
| White Oats, fancy feed.....   | 1 37% @ 1 42% d |
| White, good to choice.....    | 1 30 @ 1 35     |
| White, poor to fair.....      | 1 20 @ 1 27% d  |
| Gray, common to choice.....   | 1 20 @ 1 32% d  |
| Milling.....                  | 1 42% @ 1 45    |
| Surprise, good to choice..... | 1 40 @ 1 45     |
| Black Russian.....            | 1 12% @ 1 25    |
| Red.....                      | 1 15 @ 1 32% d  |

## CORN.

Stocks in this center are small of all descriptions, and there is nothing to warrant anticipating any heavy spot supplies of desirable qualities in the near future. For prime to choice well seasoned corn the market is firm at the quotations, but most of the business is necessarily of a light jobbing order.

|                                      |                |
|--------------------------------------|----------------|
| Large White, good to choice.....     | 1 22% @ 1 25   |
| Large Yellow.....                    | 1 20 @ 1 22% d |
| Small Yellow.....                    | 1 40 @ —       |
| Eastern, in bulk (carload lots)..... | 1 10 @ 1 12% d |

## RYE.

Offerings and demand are both light. Where transfers are effected, they are at practically same values as last noted.

Good to choice, new..... 87% @ 90

## BUCKWHEAT.

There are no noteworthy offerings from any quarter. Supplies in the hands of millers are of very moderate volume.

Good to choice..... 1 80 @ 1 85

## BEANS.

A generally healthy tone prevails throughout the bean market. There are no very heavy offerings of any sort, even Pinks, which had been offering quite freely, being now more firmly held, with indications that the bulk of the present crop has already passed into second hands. Values on white varieties are being decidedly well maintained. Local trade in Lima is not active, but is in the main at full current values.

|                                  |             |
|----------------------------------|-------------|
| Pea, fair to good, 100 lbs.....  | 4 00 @ 4 25 |
| Small White, good to choice..... | 4 00 @ 4 15 |
| Lady Washington.....             | 3 10 @ 3 25 |
| Butter.....                      | 4 03 @ 4 50 |
| Pinks.....                       | 2 25 @ 2 50 |
| Bayos, good to choice.....       | 2 50 @ 2 75 |
| Reds.....                        | 3 00 @ 3 25 |
| Red Kidney.....                  | 4 00 @ 4 25 |
| Limas, good to choice.....       | 5 30 @ 5 35 |
| Black-eye Beans.....             | 3 00 @ 3 25 |
| Horse Beans.....                 | 1 75 @ 2 00 |
| Garbanzos, large.....            | 2 00 @ 2 25 |
| Garbanzos, small.....            | 1 25 @ 1 75 |

## DRIED PEAS.

Market for Green Peas continues unfavorable to buyers, stocks of choice being very light. Niles are offering in moderate quantity, with demand limited and market for same hardly so firm as a few weeks ago.

|                             |             |
|-----------------------------|-------------|
| Green Peas, California..... | 2 60 @ 2 75 |
| Niles Peas.....             | 2 25 @ —    |

## WOOL.

There is not much business to record, and no great amount of trading is now looked for during the balance of the year. Most of the local warehouses are tolerably well filled, but the wools are not being urged to sale. It is the rare exception where buyers are able to obtain any noteworthy concessions. On the other hand, some wools are held for higher figures than are quotable.

## SPRING.

|                                      |         |
|--------------------------------------|---------|
| Humboldt and Mendocino.....          | 16 @ 17 |
| Northern, free.....                  | 14 @ 15 |
| Northern, defective.....             | 12 @ 13 |
| Middle Counties, free.....           | 14 @ 15 |
| Middle Counties, defective.....      | 11 @ 13 |
| Southern, 12 mos.....                | 8 @ 10  |
| Southern, free, 7 mos.....           | 9 @ 11  |
| Southern, defective, 7 mos.....      | 8 @ 9   |
| Oregon Valley, fine.....             | 17 @ 18 |
| Oregon Valley, coarse to medium..... | 16 @ 17 |
| Eastern Oregon, choice.....          | 13 @ 15 |
| Eastern Oregon, fair to good.....    | 10 @ 12 |
| Nevada, as to condition.....         | 11 @ 15 |

## FALL.

|                             |         |
|-----------------------------|---------|
| Humboldt and Mendocino..... | 11 @ 13 |
| Middle County.....          | 9 @ 10  |
| San Joaquin.....            | 7 @ 9   |
| San Joaquin Lambs.....      | 8 @ 9   |

## HOPS.

While offerings from first hands are not heavy, and the market cannot be termed favorable to buyers, it is more easy to buy than to sell at full current rates. The strength which the market possesses is largely in consequence of dealers having most of the crop under control. They are naturally endeavoring to secure a profit on their holdings. There has been a fair movement outward by sea lately, mainly to Australia.

Good to choice 1900 crop..... 13% @ 16

## HAY AND STRAW.

Market for hay shows much the same condition as at date of preceding review. Values have remained without quotable change. Arrivals were not of very heavy aggregate, but at same time proved ample for the immediate demand. Owing to good prospects for coming season, there is naturally little or no inclination to stock up ahead. Straw was in rather slim receipt and met as a rule with prompt sale.

|                      |              |
|----------------------|--------------|
| Wheat.....           | 9 00 @ 13 50 |
| Wheat and Oat.....   | 9 00 @ 12 50 |
| Oat.....             | 8 00 @ 12 00 |
| Barley.....          | 7 00 @ 9 50  |
| Volunteer.....       | 6 00 @ 8 00  |
| Alfalfa.....         | 8 00 @ 9 50  |
| Stock.....           | 5 50 @ 7 00  |
| Compressed.....      | 9 00 @ 13 00 |
| Straw, 3/4 bale..... | 35 @ 45      |

## MILLSTUFFS.

Market for Bran did not show much activity, but with only moderate receipts, the demand was about equal to the supply. Values for Middlings and Shorts were maintained at about last quoted range, with movement light. Prices for Rolled Barley were without very radical change. Market for Milled Corn showed steadiness.

|                     |               |
|---------------------|---------------|
| Bran, 1/2 ton.....  | 13 50 @ 14 50 |
| Middlings.....      | 16 50 @ 19 00 |
| Shorts, Oregon..... | 14 00 @ 15 50 |
| Barley, Rolled..... | 16 50 @ 17 00 |
| Cornmeal.....       | 26 00 @ —     |
| Cracked Corn.....   | 27 00 @ —     |

## SEEDS.

There is no Mustard seed offering. Flaxseed coming forward is mostly under contract. Alfalfa seed continues in very limited stock and market inclines against buyers. Business in Bird seed is of a light order and at generally unchanged values.

|                          | Per ctt.    |
|--------------------------|-------------|
| Mustard, Trieste.....    | —@—         |
| Mustard, Yellow.....     | —@—         |
| Flax.....                | 2 00 @ 2 50 |
| Alfalfa, Utah.....       | 9 @ 9% d    |
| Alfalfa, California..... | 8 @ 8% d    |
|                          | Per lb.     |
| Canary.....              | 3% @ 4      |
| Rape.....                | 2 @ 2% d    |
| Hemp.....                | 3 @ 3% d    |

## BAGS AND BAGGING.

Trading in this line is of light order at present, and in quotable values there are no changes to note. Several shipments of Calcutta Grain Sacks are now en route to this coast by sailing vessels, but at comparatively stiff freight rates, and they are in consequence rather firmly held, 6% being the general asking figure on buyer June-July contracts.

|                                                 |           |
|-------------------------------------------------|-----------|
| Calcutta Grain Bags, buyer June-July.....       | 6% @ 6% d |
| Calcutta Grain Bags, spot.....                  | 6 @ —     |
| San Francisco Grain Bags, 22x36, spot.....      | 5% @ 6    |
| State Prison Bags in lots of 2000, 1/2 100..... | —@—       |
| Wool Sacks, 4 lbs.....                          | —@32% d   |
| Wool Sacks, 3 1/2 lbs.....                      | —@28% d   |
| Fleece Twine.....                               | 7% @ —    |
| Gunies.....                                     | —@12% d   |
| Bean Bags.....                                  | 4% @ 5% d |
| Fruit Sacks, cotton.....                        | 6% @ 7% d |

## HIDES, PELTS AND TALLOW.

Hides are in fair request at current rates. Pelts are not in active demand, but sales effected show no quotable changes in values. Tallow is meeting with custom at steady prices about as rapidly as it comes forward.

## HONEY.

There is no opportunity for much activity in this article, spot stocks being of such slim proportions as to admit of little other than a light jobbing trade. Market has a firm tone, with prospect of values being maintained at current range throughout the season.

|                              |             |
|------------------------------|-------------|
| Extracted, White Liquid..... | 7% @ 8      |
| Extracted, Light Amber.....  | 6% @ 7% d   |
| Extracted, Amber.....        | 5% @ 6% d   |
| White Comb, 1 lb frames..... | 13 @ 14     |
| Amber Comb.....              | 11% @ 12% d |
| Dark Comb.....               | 8 @ 9       |

## BEESWAX.

Spot stocks are exceedingly light. More than is offering could be readily and advantageously placed.

|                                    |         |
|------------------------------------|---------|
| Good to choice, light, 1/2 lb..... | 26 @ 28 |
| Dark.....                          | 24 @ 25 |

## LIVE STOCK AND MEATS.

Market is quite strong for Beef, with prospects of so continuing for some time, owing to cattle being in light supply. In sympathy with Beef, prices for Mutton were on the up grade. Veal and Lamb brought as a rule good prices. Hog market showed firmness for desirable packing stock, without being appreciably higher.

|                                               |           |
|-----------------------------------------------|-----------|
| Beef, first quality, dressed, net 1/2 lb..... | 7% @ 8    |
| Beef, second quality.....                     | 6% @ 7% d |
| Beef, third quality.....                      | 6 @ 6% d  |
| Mutton—ewes, 8 @ 8% d; wethers.....           | 8% @ 9    |
| Hogs, hard grain fed, medium.....             | 5% @ 5% d |
| Hogs, small, fat.....                         | 5% @ 5% d |
| Hogs, large, hard.....                        | 5% @ —    |
| Hogs, feeders.....                            | 5 @ 5% d  |
| Hogs, country dressed.....                    | 6% @ 7    |
| Veal, small, 1/2 lb.....                      | 8 @ 10    |
| Veal, large, 1/2 lb.....                      | 9 @ —     |
| Lamb 1/2 lb.....                              | 9% @ 10   |

## POULTRY.

Before the last PACIFIC RURAL PRESS reached its readers there was a decided slump in the poultry market, especially for Turkeys, which was wholly unexpected; but it is the unexpected that is nearly always happening in the poultry market during holiday times. Commission houses were all anticipating high prices and some sent out much higher quotations than were warranted. As a result, there were heavy arrivals from the East, which in connection with the large quantities forwarded from the interior of this State and Oregon, caused a decided glut. Most of the latest arrivals of Dressed Turkeys went into cold storage for utter lack of custom from consumers. The market for all poultry is now recovering, but for other than choice Fryers and Broilers has not yet developed any special firmness.

|                                     |             |
|-------------------------------------|-------------|
| Turkeys, live hens, 1/2 lb.....     | 10 @ 11     |
| Turkeys, live gobblers, 1/2 lb..... | 10 @ 11     |
| Turkeys, Dressed, per lb.....       | 12 @ 14     |
| Hens, California, 1/2 dozen.....    | 3 00 @ 4 50 |
| Roosters, old.....                  | 3 25 @ 3 50 |
| Roosters, young (full-grown).....   | 3 75 @ 4 25 |
| Fryers.....                         | 3 50 @ 4 00 |
| Broilers, large.....                | 3 00 @ 3 50 |
| Broilers, small.....                | 2 50 @ 3 00 |
| Ducks, old, 1/2 dozen.....          | 3 00 @ 3 50 |
| Ducks, young, 1/2 dozen.....        | 4 00 @ 4 50 |
| Geese, 1/2 pair.....                | 1 75 @ 2 00 |
| Goslings, 1/2 pair.....             | 1 75 @ 2 00 |
| Pigeons, old, 1/2 dozen.....        | 1 00 @ —    |
| Pigeons, young.....                 | 1 75 @ 2 00 |

## BUTTER.

Market for desirable qualities of fresh continues firm, with immediate output of this description light and the demand more than ordinarily good, as is usually the case around the mid-Winter holidays. The Humboldt section is now forwarding lightly, and this accounts in no small way for the firmness prevailing.

|                                           |             |
|-------------------------------------------|-------------|
| Creamery, extras, 1/2 lb.....             | 26 @ —      |
| Creamery, firsts.....                     | 24 @ 25     |
| Creamery, seconds.....                    | 23 @ 24     |
| Dairy, select.....                        | 23% @ 24% d |
| Dairy, seconds.....                       | 19 @ 21     |
| Dairy, soft and weedy.....                | —@—         |
| Mixed store.....                          | 16 @ 17     |
| Creamery in tubs.....                     | 20 @ 22     |
| Pickled Roll.....                         | 20 @ 21     |
| Firkin, California, choice to select..... | 20 @ 21     |
| Firkin, common to fair.....               | 17 @ 18     |

## CHEESE.

Supplies are of very moderate volume, both of domestic and Eastern, and market is firm at ruling rates, with no likelihood of values receding materially for some weeks to come. For strictly choice new the market at the moment is particularly favorable to sellers.

|                                   |            |
|-----------------------------------|------------|
| California, fancy flat, new.....  | 11 @ 12    |
| California, good to choice.....   | 10 @ 11    |
| California, fair to good.....     | 9% @ 10    |
| California Cheddar.....           | —@—        |
| California, "Young Americas"..... | 10 @ 12% d |

## EGGS.

While less active than preceding week, the market has inclined most of the time in favor of sellers. Domestic fresh were not in heavy receipt, neither were desirable Eastern offered freely, nor were latter urged to sale at what could be termed low figures. Cold storage eggs were in fair supply but were in the main steadily held. California, select, large, white and fresh. 41 @ —  
California, select, irregular color & size. 35 @ 38  
California, good to choice store..... 30 @ 32% d



Eastern, as to section and grading..... 25 @ 30  
 Eastern, cold storage..... — @ —

## VEGETABLES.

A noteworthy feature of the vegetable market was a further advance for Onions, with light offerings and no prospect of the market developing weakness for choice uncut. Peas and Beans and all fresh vegetables of desirable quality were scarce and market for same favored sellers. Tomatoes were sold at a wide range, some poor going at low figures.

|                                       |             |
|---------------------------------------|-------------|
| Beans, String, # lb.....              | 5 @ 10      |
| Beans, Wax, # lb.....                 | — @ —       |
| Beans, Lima, # lb.....                | 4 @ 6       |
| Cabbage, choice garden, # 100 lbs.... | 1 00 @ 1 25 |
| Cauliflower, # dozen.....             | 50 @ —      |
| Cucumbers, Bay, # box.....            | 50 @ 75     |
| Egg Plant, # lb.....                  | 6 @ 8       |
| Garlic, # lb.....                     | 4 1/2 @ 5   |
| Onions, Yellow Danver, # cental....   | 1 50 @ 1 75 |
| Peas, Sweet, garden, # lb.....        | 4 @ 6       |
| Peppers, Green Chile, # box.....      | 40 @ 65     |
| Tomatoes, River, # large box.....     | 25 @ 75     |

## POTATOES.

Market has been slow and devoid of firmness. There were no radical changes in quotations, but concessions to buyers were the rule rather than the exception, especially of other than most select qualities. The latter sort were not in heavy stock and were not crowded to sale to any noteworthy extent. Sweet potatoes were in liberal supply, as compared with the demand, and were offered at tolerably low figures.

|                                      |           |
|--------------------------------------|-----------|
| Burbanks, River, # cental.....       | 30 @ 60   |
| Burbanks, Petaluma-Tomales.....      | 35 @ 60   |
| Burbanks, Salinas, # cental.....     | 90 @ 1 25 |
| Burbanks, Oregon, # cental.....      | 55 @ 90   |
| Sweet Potatoes, Yellow, # cental.... | 40 @ 90   |

## The Fruit Market.

## FRESH FRUITS.

In the line of fresh fruits, other than citrus, Apples are about the only description offering in noteworthy quantity. Much the same wide range of prices as before noted is still prevailing, with market moderately firm at current rates for strictly choice to select, but weak and slow for common stock. Pears are being offered in very limited fashion, and strictly choice Winter Nells are bringing in a small way comparatively stiff figures. Grapes are almost out of season; a few Verdel sell to fair advantage, but there was little inquiry for any other sort. Persimmons were in increased stock, but demand did not show corresponding improvement. There were light arrivals of Strawberries and Raspberries, with the quality in the main rather ordinary.

|                                        |             |
|----------------------------------------|-------------|
| Apples, fancy, 4-tier box.....         | 1 25 @ 1 50 |
| Apples, good to choice, # 50-lb box.   | 65 @ 1 00   |
| Apples, common to fair, # 50-lb box.   | 25 @ 50     |
| Grapes, Verdel, # box.....             | 75 @ 1 25   |
| Raspberries, # chest.....              | 5 00 @ 7 00 |
| Pears, Winter Nells, # box.....        | 60 @ 1 25   |
| Pears, common kinds, # box.....        | 30 @ 75     |
| Persimmons, # box.....                 | 50 @ 75     |
| Strawberries, Longworth, # chest.10 00 | @ 12 00     |
| Strawberries, Large, # chest.....      | 5 00 @ 6 50 |

## DRIED FRUITS.

The market for cured and evaporated fruits is not wholly lifeless, but so far as the interests of producers are concerned

for the time being, the market might as well be dead. Where an occasional sale is effected, out of offerings from first hands, it is wholly the result of selling pressure, and in most cases at figures so ridiculously low that they are wholly out of line with any quotations published or named by the trade, and are very remote from prices asked for similar goods by packers and jobbers. The best that can be said of the immediate market is that there are some buyers on the lookout for decided bargains and who are willing to take in goods when they can secure the same for next to nothing. There is an entire absence of competitive bidding. Most of the packers and dealers refuse, in fact, to make bids, which course is fully as commendable, if not in better taste, than naming figures so absurdly low, as compared with nominal values quoted, that they are little more than an insult to the parties offering the goods. It is evident that this is no time to unload, and that those who see fit to or are compelled to, could not fare much worse under any conditions. Outside or non-Association Prunes are still being offered, the quantity being variously estimated at from 300 to 500 carloads, but the lower figure is doubtless nearest the mark. The selling pressure on Prunes is most pronounced on small sizes and ungraded lots. There are some very small Prunes which would not bring to-day a cent per lb. at producing point, and the four sizes from districts outside of Santa Clara can not be crowded to sale at 2 1/2 c f. o. b. at points of production.

## EVAPORATED OR BLEACHED.

|                                                          |                |
|----------------------------------------------------------|----------------|
| Apricots, Royal, prime.....                              | 6 1/2 @ 7      |
| Apricots, Royal, choice, in sacks, # lb..                | 7 1/2 @ 8      |
| Apricots, Royal, fancy.....                              | 9 @ —          |
| Apricots, Moorpark.....                                  | 9 1/2 @ 11 1/2 |
| Apples, in 50-lb boxes, rings, pressed, fancy.....       | 5 1/2 @ 5 1/2  |
| Apples, 50-lb boxes, rings, pressed, good to choice..... | 3 1/2 @ 4 1/2  |
| Figs, White, fancy pressed.....                          | 6 @ 7          |
| Nectarines, # lb.....                                    | 4 @ 6          |
| Peaches, unpeeled, fancy.....                            | 6 @ 8 1/2      |
| Peaches, unpeeled, choice.....                           | 5 @ 5 1/2      |
| Peaches, peeled, in boxes.....                           | 11 @ 14        |
| Pears, unpeeled Bartlett's, halved, fancy. 5 @ 6         |                |
| Pears, halved, unpeeled Bartlett's.....                  | 3 1/2 @ 4 1/2  |
| Pears, quartered, unpeeled Bartlett's....                | 3 1/2 @ 4 1/2  |
| Plums, Black, pitted.....                                | 4 @ 5          |
| Plums, White and Red.....                                | 5 @ 6          |
| Prunes, Silver.....                                      | 4 1/2 @ 6      |

## COMMON SUN-DRIED.

|                        |               |
|------------------------|---------------|
| Apples, sliced.....    | 2 @ 3         |
| Apples, quartered..... | 2 @ 3         |
| Figs, Black.....       | 1 1/2 @ 2 1/2 |
| Figs, White.....       | 2 1/2 @ 3 1/2 |
| Peaches, unpeeled..... | 4 @ 5         |

Prices for new crop Prunes, as named by the California Cured Fruit Association: Santa Clara, four sizes, 3c. per lb.; 40-50s, 7c.; 50-60s, 5 1/2c.; 60-70s, 3 1/2c.; 70-80s, 3 1/4c.; 80-90s, 2 1/4c.; 90-100s, 2 1/2c.; 100-120s, 2c., which is the uniform price for this grade; Sonomas, other than smallest, 1/2c. less; other districts, 1/2c. less, except for smallest; Ruby, 1/2c. premium.

## RAISINS.

Aside from the slaughtering of some outside lots, at prices very remote from Association quotations, there is virtually nothing doing in offerings of Raisins from first hands. Sales up to date aggregate not less than 20,000 tons, and probably 22,000 tons, mostly Association goods. The quantity remaining unplaced is variously estimated at from 14,000 to 17,000 tons, about 90 per cent of the same being under Association control.

## F. O. B. FRESNO DELIVERY.—CARLOAD LOTS.

|                                                       |           |
|-------------------------------------------------------|-----------|
| Imperial Clusters, 6-crown, # 20-lb box.....          | 3 00 @ —  |
| Debesa Clusters, 5-crown.....                         | 2 50 @ —  |
| Fancy Clusters, 4-crown.....                          | 2 00 @ —  |
| London Layers, 3-crown, # box.....                    | 1 60 @ —  |
| do 2-crown, # box.....                                | 1 50 @ —  |
| (Usual advance for fractions.)                        |           |
| Loose Muscatel, 4-crown standard, # lb.....           | — @ 7     |
| Loose Muscatel, 3-crown.....                          | — @ 6 1/2 |
| Loose Muscatel, 2-crown standard.....                 | — @ 6     |
| Loose Muscatel, seedless.....                         | — @ 6 1/2 |
| (Above prices for loose raisins are for 50-lb boxes.) |           |

Thompson Seedless.—Bleached fancy, # lb., 12c; choice, 11c; standard, 10c; prime, 9c. Unbleached 9c.

Sultanas.—Bleached fancy, # lb., 10 1/4c; choice, 9 1/2c; standard, 8 3/4c; prime, 8c. Unbleached, 8c.

## CITRUS FRUITS.

Orange market has been slow and weak for the ordinary run of offerings, the quality of which did not average high. Large, highly colored and thoroughly ripe Navels were in fair request, but this was the only kind especially sought after. Lemon market was quiet at last quoted range of values, with offerings fairly liberal. Limes were plentiful and market easy in tone.

|                                       |             |
|---------------------------------------|-------------|
| Oranges—Navel, # box.....             | 1 50 @ 2 75 |
| Valencia, # box.....                  | — @ —       |
| Seedlings, # box.....                 | 1 00 @ 1 50 |
| Tangerines, # box.....                | 75 @ 1 25   |
| Grape Fruit, # box.....               | 1 50 @ 2 50 |
| Lemons—California, select, # box..... | 2 25 @ 2 50 |
| California, good to choice.....       | 1 50 @ 2 00 |
| California, common to fair.....       | 75 @ 1 25   |
| Limes—Mexican, # box.....             | 4 00 @ 4 50 |
| California, small box.....            | 50 @ 75     |

## NUTS.

While quotations show no radical

changes for Almonds and are practically unaltered for Walnuts, current figures are more in accord with asking rates than with values now obtainable in a wholesale way or on offerings from first hands. Lack of firmness is more pronounced on Almonds than on Walnuts, although offerings of the former are not heavy.

|                                            |                |
|--------------------------------------------|----------------|
| California Almonds, shelled.....           | 23 @ 26        |
| California Almonds, paper shell, # lb..... | 12 @ 14        |
| California Almonds, soft shell.....        | 10 @ 12        |
| California Almonds, hard shell.....        | 6 @ 7          |
| Walnuts, White, soft shell.....            | 8 1/2 @ 10 1/2 |
| Walnuts, White, California, standard....   | 7 1/2 @ 10     |
| Chestnuts, California Italian.....         | — @ —          |
| Peanuts, California, fair to prime.....    | 4 @ 5          |
| Peanuts, Eastern, band-picked.....         | 5 1/2 @ 6      |
| Pine Nuts.....                             | 5 @ 6          |

## WINE.

Not much doing in the market for new wines, and no business of consequence is anticipated during the current month. In quotable values there are no changes, the wholesale range of prices on dry wines of current year's vintage being 14@18c per gallon, as to section and quality. There is not much wine going as low as 14c, and only for most select Northern is 18c possible. Wholesale values on the bulk of desirable offerings may be said to be 15@16c. Moderate quantities of wine are going outward by sea and rail.

## California Dried Fruit at New York.

NEW YORK, Dec. 5.—Evaporated apples, common, 3 1/2@4 1/2c; prime wire tray, 4 1/2@5 1/4c; choice, 5 1/2@6c; fancy, 6@6 1/2c.

California Dried Fruits.—Market is quiet, but values are being fairly well maintained.

Prunes, 3 1/2@8 1/4c.  
 Apricots, Royal, 11@14c; Moorpark, 15@17c.  
 Peaches, unpeeled, 6@9c; peeled, 16@20c.

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W. M. Jones of the National Grange.

The Cullom Bill.

TO THE EDITOR:—Will you have the kindness to bring before all the subordinate Granges of this State the following extract from the report of National Master Jones at the recent session of the National Grange at Washington, D. C., in regard to the Cullom bill.

This should be a matter of vital importance, not only to the farmers of California, but to business men generally, and we urge the Grange members to bring all the influence they are capable of exerting upon our United States Senators and Representatives in Congress, in the way of personal letters, Grange resolutions, etc., in order that they may vote for this bill when it comes up for discussion and passage.

J. S. TAYLOR, L. C. S. G.

Napa, Nov. 24.

Upon the subject of transportation, the Worthy Master referred to Senate bill No. 1439, known as the Cullom bill, and stated the provisions of the bill. He then cited instances of gross injustice to the small shipper under the present system of fixing freight rates, and said:

Mr. Mitchell, president of the United Mine Workers' of America, in his public letter, dated Sept. 21, 1900, in relation to the anthracite mine workers' strike, stated that nine railroad companies, which he named, had absolute control of the transportation of all the anthracite coal mined in Pennsylvania; that they charge for carrying that coal three times as much per ton per mile as is charged for carrying bituminous coal. If this is true, and I have seen no denial or contradiction of it, it is a case of discrimination or oppression and wrong that affects the cost of warming the homes of millions of the American people.

**CUTS ON GRAIN RATES.**—The Chicago Tribune of Feb. 1, 1900, said: "It was charged and not contradicted at the meeting of the Chicago committee of the Central Freight Association yesterday that cuts on grain rates, of as much as 5 and 6 cents per 100 pounds, were made to shippers from Chicago to New York." Again, the same paper says, in its issue of Feb. 27, 1900: "Grain was taken at a rate of 12 cents from Chicago to New York, 11 cents to Philadelphia and 10 cents to Baltimore." This is a cut of nearly 50%. Large and influential shippers only secured this low cut rate, while small shippers were charged full tariff rates. Compare these rates at some intermediate points: Hillsdale, Mich., Feb. 15, 1900, rates on flour to New York and Boston, 20 cents; to Philadelphia, 18 cents; to Baltimore, 17 cents per 100 pounds. At Lansing, Mich., Feb. 16, 1900, export rate on flour: to Boston and New York, 21 cents; to Philadelphia, 19 cents; to Baltimore, 18 cents per 100 pounds. At Niles, Mich., Feb. 27, 1900, rate to New York, 21 cents.

The above are the lowest rates obtainable by reputable local millers. We might cite a similar condition of things along the line between Chicago and New York, over which lines wheat at that very time was being carried for 12 cents per 100 pounds. What effect has this on the price of the farmer's grain? I have no doubt, if investigation were made, it would disclose a similar condition prevailing all over our country. If the smaller towns along the line, or if all shippers were accorded the same rate, farmers would have received from 5 to 6 cents per bushel more for their grain, and 5 or 6 cents per bushel would have been of vast importance to the farmers of the United States.

**MR. INGALLS QUOTED.**—Mr. M. E. Ingalls, less than two years ago, and he was then President of the Big Four Railway system, said in an address in the Convention of State Railroad Commissioners in Washington: "It is well, perhaps, that we should look the situation fairly in the face, and, while I do not care to be an alarmist, I feel bound to describe to you plainly the condition to-day, so you may understand the necessity for action. Never in the history of railroads have tariffs been so

little respected as to-day. Private arrangements and understandings are more plentiful than regular rates. The large shippers, the irresponsible shippers, are obtaining advantages which must sooner or later prove the ruin of the smaller and more conservative trader, and in the end will break up many of the commercial houses of this country and ruin the railways."

**EXPORT RATE ON CORN.**—In February, 1900, export rate on corn from the Mississippi river to New York was 13½ cents per 100 pounds; in February, 1900, the rate was 23 cents per 100 pounds—a difference of 9½ cents per 100 pounds, or, practically, 6 cents a bushel on corn. Which of these rates was right? Which was reasonable and just? The 13½-cent rate was voluntarily made by the railroads, and it is fair to presume that they could carry corn at that rate and make a fair profit. The farmers of the United States grew 2,200,000,000 bushels of corn in 1899, and, as the price of corn is affected all over the country by the cost of transportation, out of this one crop the selling value was reduced by the action of the railroads \$132,000,000, and this, too, without the farmers having one word to say about it. Protests are unavailing. An appeal to the Interstate Commerce Commission, under the present law, would do no good, as the decision of the Supreme Court in 1897 gives them no power to fix rates or to enforce a just one.

Mr. M. E. Ingalls said in an address in May, 1898: "A slight improvement in the rates, which would be scarcely felt, would make this investment good. One mill per ton per mile, or one-fourth of a cent additional last year, would have made \$95,000,000 increase in net revenues, and this would have paid 3% upon this invested capital." If so small a change of freight rates brings such vast revenues to the railroads, what would be the stupendous amount, if all the freights were raised in like proportion to the raise made on corn, from February, 1899, to February, 1900?

**DEMAND FOR REDRESS.**—Can any one explain, on any line of justice, equity or fairness, why the farmers of the great corn belt of the world should be compelled to pay a rate that almost precludes a possibility of profit? Is there no redress? Can the Government of the United States afford no protection to the property rights of that large class of its citizens who produce 70% of the wealth that flows into the channels of trade, and make it possible for all industries, including these same great transportation companies, to prosper and grow wealthy? Will a republic, where the government is supposed to give to all its citizens an equal protection and an equal opportunity to transact business, allow one great interest, representing about one-tenth of the wealth of the nation, to so manage its business as to practically fix the value of all the other property of the country; to build up one locality; to destroy another locality; to give special privileges and facilities to certain men, that they may monopolize all business in their lines and crush all men engaged in competition with them? I do not believe that it will. When the people shake off their lethargy and demand of their representatives in Congress remedial legislation and hold them personally responsible for their action, such remedies as Senate bill No. 1439 will give them will be passed and become the law of the country. Then powerful corporations, however wealthy and influential, will be compelled to obey the law, the same as the poorest citizen of the republic.

**UNITED ACTION URGED.**—The bill is before the Senate and can be acted upon any time the Senate sees fit to do so. I therefore, as Master of the National Grange, urge that members of the Order, each subordinate Pomona and each State and National Grange, use influence to secure speedy and favorable action on this most important measure. As we view it, if this bill becomes a law and all men and all corporations and all sections of the country are accorded fair and equitable freight rates, the hardest blow that at this time could be struck to monopolies and trusts would be given, and the greatest encouragement to enterprise and thrift to the people of this country would be afforded. Agriculture and the entire people would be benefited and no harm would come to the railways themselves. We believe the rates should be just and uniform.

We are not enemies of transportation companies, but we believe that they are not a private business; that, in truth and in fact, when they sought franchises, when they sought to possess themselves of a right of way over private lands, they were right when they claimed they sought to establish great highways for public good, and that, now they are built, they should be compelled to use the public fairly and all alike. We do not believe that they should arbitrarily set beyond



the power of review prices for public service; but that disinterested, capable and honest men should pass upon their freight and passenger rates, and fairness and equity should be shared alike by the railroads and the public who use them. Thus no injustice will be done to any of the interests of our country.



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## CORRESPONDENCE.

At the Tulare Fair.

TO THE EDITOR:—Agricultural fairs! What of them? They are good. What a lot of education and encouragement they can be to a person. Why doesn't California have more of them? California can have more and better fairs than any other State in the Union if she wants to. The fair just held at Tulare was a bright example of what an enterprising community can do when they



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go at it in earnest. Tulare and the whole San Joaquin valley will reap rewards from that fair for years to come. The management and everyone who helped to get up those exhibits did great credit and honor to themselves. Disaster to the undertaking was foretold the managers if they did not admit all kinds of gambling devices, etc., to their fair. But these were staunchly refused admittance, and here is proof of the pudding: A real good, clean fair that proved a great success financially, and the people did not get enough of it in one week either. Petitions came in to extend the time and it was done. That's the way with a good thing. With the varied resources of this State there ought to be an industrial exposition some place in this large State almost every month in the year. California can have citrus and other fairs and floral festivals when the East is bundled up fighting its cold and snow storms. The reports of these fairs would be some of the best advertising California could have in the East.

THE EXHIBITS.—On entering the commodious pavilion and going to the right were the exhibits of Porterville and Tulare Grange. This Grange of about forty members did great credit to itself in the exhibit of dried and fresh fruit. The apples were much finer than could be expected from such an interior warm section. Sixteen varieties were shown. The China oranges attracted considerable attention. They were grown by Mr. J. J. Bachelder of Tulare and were the first crop of the eleven-year-old seedling trees. Seeds were obtained in China. In shape they resembled the Bartlett pear, while their size reminded one of young pumpkins. Several varieties of small grain, and three varieties of fine corn were shown. The roses and flowers reflected much credit on their growers. In the exhibit of vegetables were choice specimens of Irish and sweet potatoes, beets, carrots, lettuce, extra fine cauliflowers, cabbages, melons and pumpkins. They had one tomato vine measuring 14 feet in height.

PORTERVILLE DISPLAY.—The Porterville exhibit occupied three large stands, one being devoted entirely to lemons and two to the different varieties of oranges, limes, pomelos—some of these in big, beautiful clusters—pomegranates and some very choice apples grown in the foothills at an elevation of 3200 feet. One orange was shown weighing 2 pounds 1½ ounces.

VISALIA.—The blue ribbon was secured by the Visalia Board of Trade for its fine exhibit of fruit in glass jars and artistic display of dried fruit. Jacob & Bro. had a large table of very choice specimens of apples, pears and miscellaneous products. Fleming & Jacob of Visalia had a good display of dried fruit well packed.

LINDSAY.—The Lindsay exhibit was the finest, most artistic and attractive of all exhibits and of course got the first premium. C. J. Carle of Lindsay was the designer of the centrifugal pump and electric motor, so well represented by oranges in a frame standing about 18 feet high. This was very appropriate because the water used for irrigating in the vicinity of Lindsay is being pumped by just such outfits. Mrs. W. T. Simons was the designer of all the beautiful exhibits on the table, such as pyramids of all shapes, horse-shoes, anchors, crosses, crescents, stars, etc., all this being bordered with leaves of English ivy and variegated leaves, and interspersed with beautiful and appropriate potted plants and colored electric lights, altogether making a display too grand and beautiful to be done justice in describing it. It had to be seen to be appreciated.

The exhibit from the Lindsay Nursery Co. was very fine and easily carried the blue ribbon. The eight-months-old orange and lemon trees attracted much attention and comment. Their goods are well worth investigating by those who intend to plant citrus and ornamental trees.

FLOWERS.—Mr. and Mrs. J. C. Colwell of Los Angeles had a very tasteful and attractive display of fragrant flowers, perfumes and flavoring ex-



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tracts. They captured several blue ribbons. John H. Sievers of San Francisco had a very good and showy display of roses, flowers and florists' goods.

FRESNO.—Fresno county had quite a large and varied exhibit of fruits, etc., but any one acquainted with Fresno knows that it could have done far better. Fresno simply let a good opportunity to do itself some good go by unimproved this time. The Minnewawa of Fresno had an exhibit that had more variety to it than any other, and not only that, but it carried with it a principle that should be carried out as far as possible on every farm. It is that of manufacturing into a finished product as far as possible what might be termed the raw products of the farm. Fruits and vegetables grown, for instance, were put up in cans such as we buy at stores, also meats. Fruit that was good but for some reason or other injured in looks or of deficient size was made into jams, jellies, marmalade, etc. Here is a list of the finished products of "Minnewawa," as given by Dr. Sherman: Olive oil, honey, pickled olives, canned fruits, peaches, pears, plums, apricots, nectarines, baked pears and apples, jellies and jams, canned vegetables, string beans, pumpkin, squash, tomatoes and asparagus, canned meats, potted chicken, turkey, Belgian hare, ham, veal, corned beef, sausage, etc., chicken soup, catsup, orange marmalade and the Minnewawa brand of butter was shown. Of course several prizes were received. This method of finishing will be carried out to a larger extent next year.

CITRUS ORCHARDS.—Mr. C. Talbot of the Sunnyside citrus orchard, near Porterville, had some good and interesting exhibits.

Messrs. A. Gregory and G. T. Frost had one stand of fine well-packed citrus fruits that was very attractive.

The "Bonnie Brae" citrus orchard of Exeter had perhaps the best individual display. It attracted much admiration and comment for its display, good fruit and great variety. Much good taste was shown in the arrangement.

EXPERIMENT STATION.—The Experiment Station had an exhibit one could learn much from on inquiry. Twenty-two out of the 100 varieties of grapes were shown; nineteen varieties of olives, eighty varieties of wheat, one of these likely to become very valuable in this State and on the Experiment Station grounds proving to be more valuable than the leading varieties of the present day in this State. It is called California Spring. Twenty varieties of barley, five of rye and nine of oats were shown; also some speltz.

EXETER.—D. R. Griffith of Exeter exhibited forty large Navel oranges, the product of one two-year-old tree. The room containing all the above was magnificently decorated with branches of orange and olive trees containing fine specimens of well-ripened fruit, also beautiful clusters of different varieties of pomelos. This was furnished by Mr. J. J. Cairns of Lindsay, and added a great deal to the beauty of the place.

IMPLEMENTS AND MACHINES.—In the annex were the displays of the Linder Hardware Co. and A. Young, both of Tulare, and dealers in hardware, agricultural implements, etc. Both displays were large, beautiful and attracted very much attention. The Page fence and also the Ellwood fence

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were very well represented and shown up by their respective agents in Tulare City. These are the kinds of fence for a farmer to use, too.

Joshua Hendy Machine Works of San Francisco showed half a dozen different styles of milk separators, No-Tin milk tester, such as every dairyman ought to have, and also Sturge's steel churn, Simpson's butter moulds, and in fact all kinds of dairy supplies.

**PUMPS.**—In the line of machinery there the most interest was centered around the various centrifugal pumps in operation, and there are evidently good reasons why people should be so much interested in these in this section.

Fairbanks, Morse & Co., of San Francisco, exhibited a 12 H. P. gasoline, distillate engine, running a 7-inch Haslehurst centrifugal pump throwing 1500 gallons per minute. Also two Jack-of-all-trades, one connected to a spray pump, and thereby doing away with the usual hard labor of spraying; the other connected to a deep well pump intended to take the place of a windmill.

Byron Jackson Machine Works of San Francisco exhibited two 3½-inch and one 2½-inch centrifugal pumps. These were run by electric motors and each had a capacity of 300 gallons per minute, due to a pressure of 100 feet. One was pumping 700 gallons per minute 30 feet. A 10 H. P. electric motor was directly connected. They also had a piston pump and one 4-inch compound vertical.

Oriental Gas Engine Co. of San Francisco showed a 6 H. P. crude oil engine running a 5-inch pump and throwing about 1000 gallons per minute. This was run at an expense of 5 cents per hour for crude oil.

Mr. Porteous of the Fresno Agricultural Works gave a good display of their implements for cultivating vineyards and orchards. Their new Fresno disc harrow and orchard plow attracted much attention, and also their new vineyard truck.

Hanford Agricultural Works showed various kinds of harrows and agricultural implements.

The flour mills of Tulare and Visalia both had very good and attractive exhibits of their products.

**LIVE STOCK.**—Why did not the live stock men of this district make a better display? Such a lot of good alfalfa as grows in this section, and such large herds of cattle as they have, and yet so few cattle showed up! Some of the live stock men simply didn't make use of a good opportunity in this instance.

Mr. J. Dammeier of Tulare showed a good yearling Clydesdale stallion that weighed 1285 pounds, and was a fine, well-built animal.

Mr. L. B. Coats of Armona showed fine, well-bred Norman horses.

The Pioneer Land Co. of Porterville showed some real good, well-bred registered Herefords of different ages.

Mr. L. A. Pratt showed some very good Jerseys.

The breeders of hogs did well, and

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those that showed up had good stock, too. Mr. J. R. High of Hanford exhibited some pure-bred registered Poland-Chinas that would be extremely hard to beat. They easily carried off first premiums. Mr. High will be a hard one for anybody to get ahead of when it comes to breeding hogs. He spares no expense in getting the very best of foundation stock for his herd. At the head of his herd is Ideal Black U. S., and his dam was sired by Chief Tecumseh 2d 14579. The sows—Lady Duffield and Morris Maid—are as good as any in the State.

Mr. D. G. Wood of Visalia showed some very good Ohio Improved Chester Whites. They were real good specimens and, of course, got the first premium. Some other hogs were also shown.

**POULTRY AND PET STOCK.**—The poultry and pet stock breeders did better, comparatively, than the other live stock men. There were more exhibits, yet there would have been room for many more, and there ought to have been many more. Mr. R. B. Holcomb of Tulare showed some fine specimens of Black Minorcas. He got first on breeding pen and several other prizes. Mrs. M. M. Forman showed a very fine (special) trio of Minorcas, on which she got special premium. Mr. L. M. Baylus exhibited some very good Partridge Cochins, on which he got first on breeding pen, first for cockerel and pullet, and first for cock and hen. Mr. I. L. Jameson, Tulare, got first on breeding pen of White Plymouth Rocks and first on cockerel and pullet. On White Cochins he also got first on cock and two hens and first on Bronze turkeys. His stock was very good. Mr. W. A. Fothergill, Tulare, got first on Silver Spangled Hamburgs, first on White Crested Polish, first for best exhibit of fowls, they being a pen of Buff Plymouth Rocks, first on Black Minorca hen, first on cockerel and pullet of Barred Plymouth Rock, first on White Plymouth Rock cock and hen and first on Black Minorca cockerel and pullet; also silver medal and first premiums on Belgian hare exhibit. K. B. N. Tulare, Dec. 2.

#### A New Pear.

We have received a sample of the new pear named the Crocker Bartlett, originating with L. L. Crocker of Loomis. It is a handsome pear, colors fully, and yet remains very firm. It seems to have exceptional shipping characters and will apparently keep for months. The quality is good and the variety seems worth wide trial.

#### Fresno County Citrus Lands.

It is worthy of notice that the best thrifty Navel oranges at the Tulare fair were grown in Fresno county. The most promising section for orange culture is near Mt. Campbell, about seven miles northeast from Reedley. Here is a level or sloping mesa, at an elevation of sixty to eighty feet over adjacent lands, that is pronounced to be exceptionally good by men who have had over twenty years' experience in citrus culture in the southern part of the State. The soil is a dark red dry hog, rich in iron oxides, provided with an unusually good and secure supply of water for irrigation purposes from Alta canal and natural reservoir, and being in one of the best sections of the thermal belt makes this section all that can be desired for citrus culture. Two fine groves have been started, doing remarkably well, and several tracts are sold. Mr. W. N. Rohrer of Fresno, Cal., will give further information to parties who may desire it.

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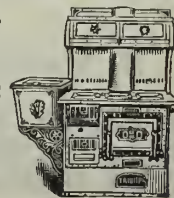
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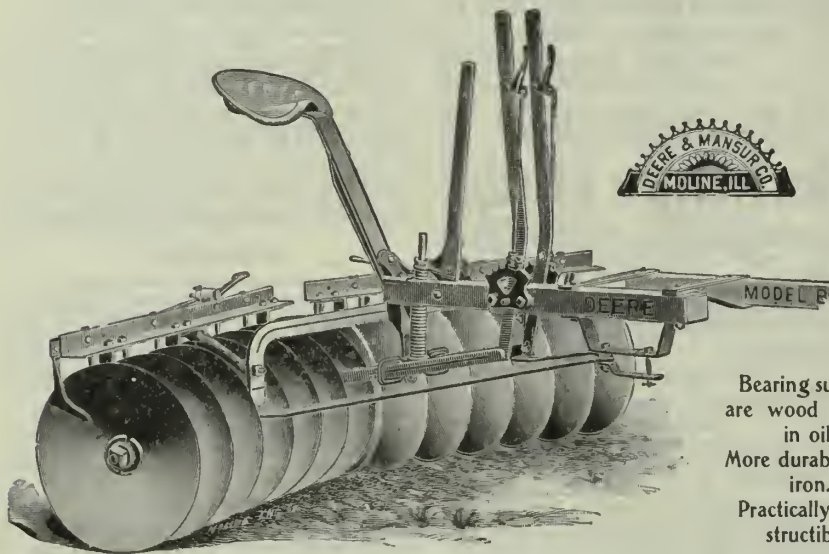
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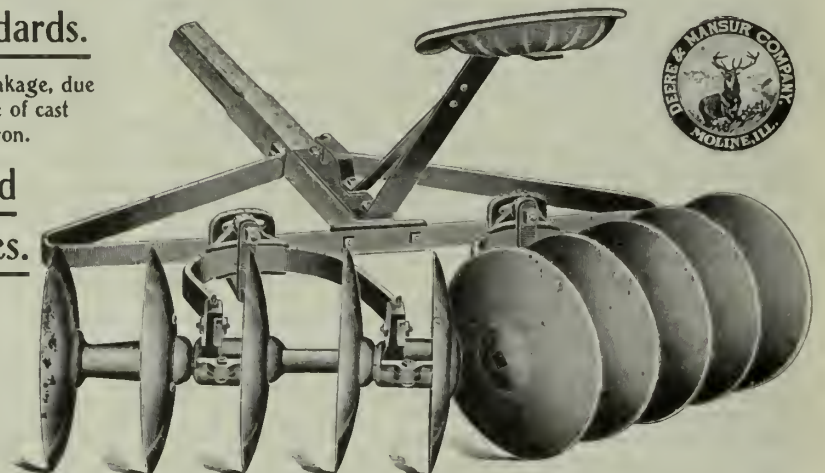
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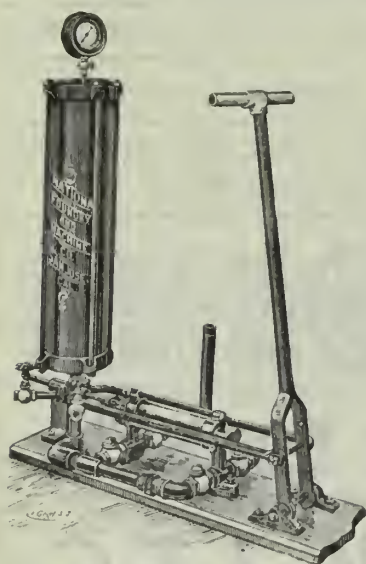
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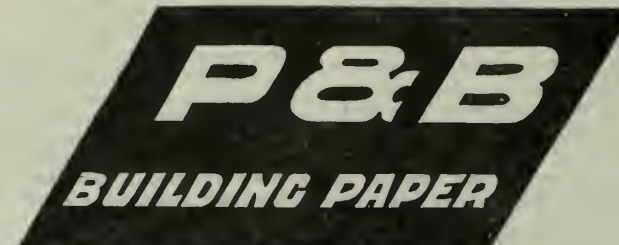
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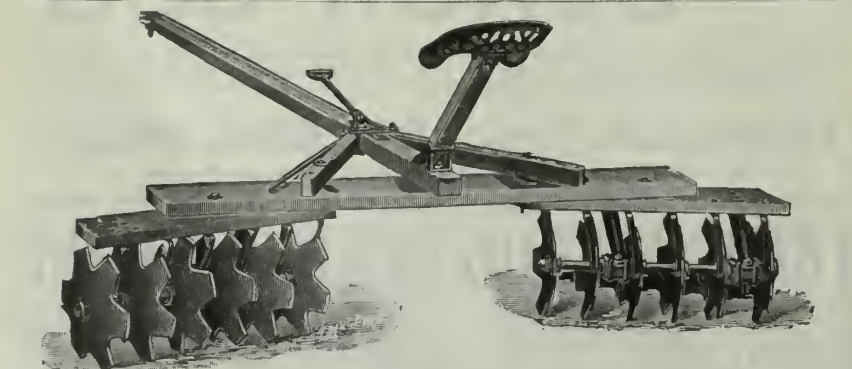
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 24.

SAN FRANCISCO, SATURDAY, DECEMBER 15, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

### Pruning the Peach.

It would seem from all our experience with the peach tree that it would be unnecessary to suggest the importance of regular shortening in of the yearly growth to ensure bearing wood near the ground and to stimulate the fresh annual production of such wood of good size and vigor. This course is widely known and followed, and yet there are some who never seem to learn it and others, new to the State, to whom perhaps it has not been suggested. The peach is a long-lived and healthy tree in California, and will bear profitable crops for a score or more of years on good, deep soils, if it is handled in a way to prevent its becoming too tall, gaunt and bark-bound. Peach trees, if neglected, will soon run to waste and become a canopy of weak foliage sustained by a framework of thin limbs—a sort of an umbrella. In this case the small wood near the ground dies, and the thin wood high up bears small fruit. Sometimes the wind will break one of these top-heavy trees to pieces, and a strong sucker from below will rush up and make a new tree on the ruins of an old one. This is a token that the root of the tree is full of vigor and that the old top has ceased to be an adequate companion for such a root. The tree needed a new head and it came by accident. But the error lies in allowing a peach tree to get into such a strait. By regularly shortening in part of the new growth, and by thinning away shoots which are in excess, the tree can be prevented from becoming leggy—brushy at the top and bare below.

Occasionally it is desirable to give the tree a severe cutting back, going into the old wood and removing much of it. In this way the tree is practically given a new head or a new outfit of bearing shoots. We have seen many old peach orchards which could be cut back almost to the forks of the main branches with advantage. This, however, can be prevented by lighter cutting before the condition requiring beheading arrives. Suggestion of a good cutting back, which should be frequently given the tree, can be had in the accompanying picture from photographs of the same tree before and after pruning. The picture is taken from the report of the University Agricultural Experiment Stations and represents work at the Pomona Station, which is in

charge of J. W. Mills, who is a well-skilled peach grower, having had much experience in the Sacramento valley before going to southern California. The pictures show a well-shaped peach tree, according to California ideals, and it has made the vigorous growth characteristic of the tree in this climate. The view after pruning will suggest the general reduction of the top, which is good for the tree. The picture makes the near corner of the tree seem much higher than the distant parts, but that is not actually so. The idea is to keep the tree about the same height all around. The top is opened somewhat, and this will encourage the growth of new shoots from the top sides of the main branches in the center of the tree; these will probably put forth foliage to shade the old bark before the summer sun reaches burning heat. The growth of such a tree during the following season is usually very vigorous, and the following winter there will be less heavy cutting, but much thinning of shoots to prevent the tree from becoming too dense. This is the sort of work which is now being largely done with peach and apricot trees in the fruit districts, and the suggestions are therefore timely.

### A Prolific Wine Grape.

The bearing vine shown on this page is growing in the vineyard of the sub-station at Pomona, Los Angeles county. It is a good illustration of the advantage of a high stake in promoting the fruiting of those varieties which enjoy such degree of freedom. It is also fairly illustrative of the characteristic pro-



Fruiting of Petit Bouschet at Pomona.

lificence of the European grape varieties in this State.

### Irrigation Progress.

We have on another page of this issue a few extracts from the address recently delivered in Chicago by Prof. Elwood Mead, president of the Irrigation Congress. The address gives an excellent view of the present situation in national irrigation work. In connection with this, it is interesting to note that in the irrigation investigations of the U. S. Department of Agriculture, proceeding under the direction of Mr. Mead, the largest single enterprise has been in the State of California. The growing value and increasing scarcity of water in this State are creating imperative need of better laws to control the distribution of streams, and there is much public interest in this subject. The local interest has been shown by the co-operation of the California Water & Forest Association in the work of the Department and the contribution of several thousand dollars to be expended under the direction of the agents of the Department. Eight typical streams in different parts of the State have been thoroughly studied with reference to the conditions under which the water for irrigation is owned, distributed and used. A comprehensive report on these investigations is now in course of preparation. It is believed that this is the largest and most comprehensive inquiry regarding irrigation laws, customs and conditions which has been undertaken in this country. Similar investigations, though on a smaller scale, have been made in Utah, Colorado, Wyoming and other States.



Peach Tree at Pomona, Los Angeles County, Before and After Pruning.



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E. J. WICKSON.....Horticultural Editor.

San Francisco, December 15, 1900.

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## The Week.

The absence of rains has given a solid week for field work, and a vast amount has been accomplished in all parts of the State. A heavy cloak of fog has covered the interior valleys and low temperatures have ruled, but evaporation has been slight and moisture is ample for present needs. At the south the orange harvest proceeds under bright skies. All regions of the State will rejoice in more rain at an early date just to add to the season's surety.

Wheat remains in about the same position we found it a week ago, neither better nor worse as regards price, but the outward movement shows increase; fully 15,000 tons have been sent afloat during the week. Barley has been inclining slightly downward, mainly due to Call Board manipulation, some of the heavy-weights tendering deliveries on contracts, supposed to be for the purpose of depressing values. Oats are being well held; buyers must pay the price or go without. Corn is easier for both domestic and Eastern, with offerings on the increase, and considerable coming forward which is not choice. In the line of mill feeds there are no appreciable changes; most descriptions are in good supply. Hay is being held up to former rates, being largely in second hands, but the market is not firm. Beef is tending against buyers, with supplies light, and is likely to rule materially higher before the close of the year. Mutton is higher and firm at the advance. Hogs are meeting with good inquiry at steady values, and are not likely to soon rule lower. Fresh butter of high grade is scarce and dearer. Of held and packed stock there is an abundance. A carload of the latter was forwarded East the past week. Cheese is bringing good figures, and market bids fair to continue firm for some time. Values for eggs are on a high plane; producers who have plenty of hen fruit for sale now are walking on velvet. Poultry of most kinds has been faring badly, fryers and broilers being about the only exceptions; the market has been practically deluged with Eastern. Onions are in scanty supply and prices are inclining upward. Of potatoes, however, there are more than enough for the demand, and market for this vegetable is weak. White and Lima beans are being quite firmly held; colored varieties show steadiness. Fresh fruit market has developed no important changes for apples or pears. Apples are in good supply; offerings of pears are not heavy. Citrus fruit market has been quiet at generally unchanged values. Latest arrivals of oranges are showing improved quality. Dried fruits are for the present

neglected; midwinter dullness is on in full force. In wool there is practically nothing doing. Hop dealers quote firm figures, but they are not buying at their quotations.

## The Fruit Growers' Convention.

The Fruit Growers' Convention held to the end the interest, activity and spirit which characterized its opening session and which we noted in last week's PACIFIC RURAL PRESS. Even to the final session on the afternoon of the fourth day there was no diminution nor decadence. This betokened the earnestness of the people. Another notable thing about the convention was that it had exceedingly little to do with fruit growing and very much with fruit selling, transportation and legislation liable to affect the commercial interests of growers. So far as culture of fruit went in the convention, it consisted in Mr. Roeding's admirable essay on the fig, which appears in this week's issue, and the discussion of resistant vines in which several speakers participated. In view of this fact, the objection that the almighty dollar is the only fruit which is discussed at a California Fruit Growers' Convention is well placed. It would be desirable if we had more pomology and less commercialism; but while the interest is developing and making a place for itself in the world, it is unavoidable that the commercial aspects should predominate. As we advance, the pomological interest will be more clear. There is no use in arraigning the convention for its ruling topics. They are evidently what the people want, or the people would not assemble or linger as they now do.

There were two chief lines of interest on the commercial side, viz.: co-operative organization for handling fruit and protection of fruit from competition with foreign products through the maintenance of the present tariff. The first line, viz.: under co-operative organization, was given much time in the convention and in committee. A committee of fifteen representing all parts of the State worked over the chances of fuller organization and finally reported in favor of a special convention to be held in San Francisco on the third Tuesday of January, at which committees will submit definite propositions for organization, reached by previous discussion. The committee will consist of a fruit producers' council of one representative to be selected by such fruit or nut organization of the State, such representatives to be one delegate from each of the following industries: Citrus fruit, olive, walnut, almond, raisin, cured fruit, and fresh fruit growers; and the council will meet in this city on the second Tuesday in January. The California Cured Fruit Association, through its president, Judge Bond, stated that it is the purpose of that association to continue the canvass among producers of dried fruits in order to increase its usefulness and carry out the original intention of its organization. It will therefore work with those who desire to form the fresh fruit growers' association; and this opens the way for a general propaganda along the lines of wide organization, if the people desire it.

Another leading topic was the effort to secure more rapid and regular transportation to Eastern markets. This was discussed in our report last week and it was kept in view all through the meeting. The following was finally declared to be the sentiment and purpose of the convention: That the growers demand an improved transportation service and a schedule time to all Eastern markets from the companies transporting these products for us; that said service and time approximate a delivery to Chicago and similar points in six days, and to New York and Atlantic coast points in eight days; and that our transportation committee be directed to forthwith place themselves in communication and conference with the representatives of all transcontinental transportation companies, to the end that we may as speedily as possible be advised whether we can expect the desired relief and arrangements for the coming season or not. This was all the convention could do in the premises. The transportation committee will no doubt make an early connection with the new management of the Southern Pacific Company which will be set up in this city at the opening of the coming year.

The earnestness of California producers in demand-

ing the continuation of the existing tariff on imported fruit, and their opposition to its breaking down through the enactment of reciprocity treaties, were both very clear, indeed. Several hours were spent in close discussion, and full details were given by Californians who had had recent observation along the line at the national capital. They declared that they noted with alarm the tendency toward the negotiation of commercial or so-called "reciprocity treaties," which vitally affect California and her interests, and protest against all such treaties which tend to lower the protective tariff on any American product; also, that they denounce the principle of treaties affecting the tariff being negotiated in secret by our Government; and called upon the State Legislature to take action in defense of the interests of the State. The impression widely prevailed that it was necessary to keep this subject to the front, or California fruits will be reciprocated to destruction in the interest of selling Eastern coal oil and provisions to the tropical Americas. One of the by-products of the convention was the permanent organization of the Womans' Agricultural and Horticultural Union of California. Officers were chosen as follows: Mrs. M. E. Sherman of Fresno, president; Mrs. B. Shields of Mills, Sacramento county, and Mrs. L. A. Bancroft, Contra Costa county, first vice-presidents; Mrs. Emma Shafter Howard of Oakland, secretary. These four and Mrs. Dr. J. M. Bowen constitute a committee on constitution and by-laws, to report at the next annual session, to be held at the time of the meeting of the Fruit Growers' Association. This undertaking will no doubt add to the interest of the fruit growers' conventions of the new century, and accomplish much, also, for the encouragement of the many excellent women who are actively engaged in the out-door occupations in California.

One of the graceful and fitting acts of the convention was the adoption of an earnest tribute to the public services of Ellwood Cooper of Santa Barbara, and a sincere hope that he may still be spared many years to carry on his important work for the upbuilding of the State.

THE President of the United States will visit California in the spring, and the Mayor of San Jose proposes that he shall be greeted in that city with an elaborate floral fete. No form of entertainment would be quite so appropriate for the valley, and none can be more original or more attractive. "People of all political parties are invited to participate," says the Mayor, "for the President is the chief magistrate of us all, and I am sure that, following the example of the past, he will be welcomed by all with the utmost hospitality."

It is now stated that the owner of the Calaveras grove of big trees is only willing to sell the trees to the Government on the basis of the number of feet of lumber in the grove. This is not to be considered, and the Secretary of the Interior has set the price at \$125,000, saying that he thought \$25,000 was sufficient interest on the purchase price. In this connection, Senator George C. Perkins advises Californians to use their influence to have the \$125,000 clause eliminated from the bill now before Congress.

THE oleomargarine bill, known as the Grouett bill, passed the House of Representatives by a large majority and is now in the Senate. There is a contest between the finance committee and the agricultural committee as to which shall have charge of the measure. Senator Proctor of the agricultural committee has given notice that he will move to refer the bill to his committee, which is the best place for it, no doubt.

ONE HUNDRED DOLLARS A PIECE for steaks and \$10 a pound for roast beef were paid at the Fat Stock Show in Chicago last week, when New York butchers bought the prize Aberdeen Angus steer Advance for \$1.50 a pound. This was paid for beef on the hoof; and, as the steer tipped the scales at 1430 pounds, the price was \$2145.

UNDER date of Dec. 10th, the St. Petersburg official estimates for this winter and spring crop in sixty-four departments of European Russia are as follows: Wheat, 658,800,000 poods; rye, 1,401,700,000 poods; oats, 721,600,000 poods. (A pood is a little more than a bushel.)



## QUERIES AND REPLIES.

### Pruning Cherry Trees.

TO THE EDITOR:—Should cherry trees be pruned or not? Many people tell me they should not be; that it destroys the shape; that they do not grow after pruning, and that in all respects they are different from other trees. I concluded I would ask advice at headquarters, and if you will kindly answer I shall be greatly obliged.—ORCHARD OWNER, San Francisco.

Cherry trees should be pruned while young to get low branching and satisfactory shape. After the trees come into good bearing they need little pruning and should not be regularly cut back as is done with peaches, apricots, etc. When the cherry bears well it ceases its vigorous wood growth and to cut it back will induce too much wood growth and will interfere with the proper form. It is, however, necessary that the trees should be looked after and weak or dying branches, removed and excessive shoots thinned out else the tree may become too thick with branches. It is, however, a mistake to claim that the tree will not grow after pruning. Cherries can be regularly pruned but it is not desirable to cut back because the tree keeps good form and bears well without it.

### Stable Manure for Oranges.

TO THE EDITOR:—Do you consider a large amount of stable manure bad for an orange orchard, making the fruit thick-skinned, or otherwise harming the trees or fruit? I have a small orchard of five acres, and about forty horses, and can put on manure to almost any extent. What would you say should be my limit? Can you further tell me whether there is any forage plant established as very good for our southern hill land which I can buy in bulk in the general market?—SUBSCRIBER, Ventura county.

It is probably true that too much stable manure or any other nitrogenous fertilizer will make thick skinned or puffy oranges. And yet Mr. Thompson of Duarte uses immense amounts of stable manure and produces the finest oranges, and others have done the same. On the other hand, some report bad results. It probably depends somewhat upon the soil. No one can say what the limit should be in any place without trial. Use a fair amount and watch for results as a guide to future use. We do not know any forage plant which is very good for dry southern slopes, except the native winter-growing plants. No perfectly satisfactory plants have yet been found for summer growth on the driest lands.

### Australian Vegetable Wonders.

TO THE EDITOR:—I have read of a strange vegetable announced by the American Consul at Auckland, Frank Dillingham, in the shape of a certain cabbage called "Yates' aphid-proof cabbage," an Australian-raised variety. Another vegetable worthy of attention is an African cucumber from Rhodesia, South Africa; also, the Mongre, or edible podded radish, producing numerous cups of long pods—a new vegetable from Java. I would be pleased to get any or all of those varieties. How are they to be had?—C. C., Santa Barbara.

We saw the account you mention. It was merely a page from some Australian nurseryman's catalogue which an American Consul thought worth while to report to our State Department. The things can not be had in this country yet, and there is always a question whether the nurseryman did not overdraw his description. If you will write to Division of Consular Reports, Department of State, Washington, D. C., and describe what you refer to, they will send you a copy of the circular, and then you can order from Australia, if you desire.

### Winter Irrigation of Alfalfa.

TO THE EDITOR:—We have a small plot of alfalfa, and a surplus of water through the winter months that will not be utilized unless we let it run on the alfalfa. The thermometer sometimes runs as low as 20° here. Would it be advisable to let the water run onto the alfalfa throughout the winter?—READER, Antelope valley.

We should not want to submerge the alfalfa just for the sake of disposing of surplus water, but from what we can guess of the volume of surplus water and of the thirst of the soil in your region of the Mojave country we should not apprehend submergence. Wetting down the ground thoroughly will not hurt the alfalfa, in fact it will probably be of considerable advantage to next summer's growth. The temperature you mention is nothing to alfalfa while

dormant. Let it have the water as long as it sinks freely into the soil.

### Green-Manure Plants.

TO THE EDITOR:—Last year I received some fenugreek seed from the University. It made a good growth and had tubers on the roots as large as small beans. It grew best in the shade of lemon trees. I did not save seed. Can I get more this year? How would field peas do for green-manuring? In the garden they grow all winter.—READER, Santa Paula.

The University is not distributing fenugreek this year, and we doubt if the seedsmen have it. We are glad to hear of its success. It has done well in Algiers, but not in many places in California so far as reported. The field pea is one of the most valuable green-manure plants in our valleys and is being grown to a considerable extent for plowing under in orchards in southern California. It is hardy and grows well at low temperatures.

### Broom Corn.

TO THE EDITOR:—Can broom corn be grown advantageously anywhere in this State? It is not grown in this county, the nights being too cool for it. It may be that it grows too rank in regions where the average daily temperature is favorable and where irrigation is necessary.—READER, San Jose.

Good broom corn is grown in this State. The chief product has come from the moist lands of the Sacramento valleys, but a good article is also grown in some of the warmer coast valleys. We have never heard of the objection you mention of its getting too rank. If that occurs it can be easily overcome by slight change of place or less cultivation.

### The Jordan Almond.

TO THE EDITOR:—Is the almond known to the trade as the "Jordan" almond grown in California? If so, from whom may trees of that variety be purchased in your State?—F. G. S., Boone, Iowa.

The Jordan almond is not grown in commercial quantities in this State. The shell is too hard to meet the requirements of table nuts—or for some other reason, our California seedlings have secured the right of way. The trees can be had of Felix Gillet, Nevada City, Cal.

### Alfalfa for Fowls.

TO THE EDITOR:—Please suggest a good grass to plant whereon chickens may forage—something that does not require much irrigation.—POULTRYMAN, Hollister.

We know of no perennial forage plant for fowls so good as alfalfa. On a deep soil it will grow without irrigation and will keep a good show of green with a moderate amount of water. Frequent cuttings of heavy crops can only be had with plenty of water, but for poultry pasture it will do well with a little water. We know of nothing to compare with it for this purpose.

### Ferrets for Gophers.

TO THE EDITOR:—Are there any ferrets in the State, and, if so, where can they be found? Do you know whether these little animals have ever been used to kill gophers?—SUBSCRIBER, Davisville.

There are no doubt ferrets in the hands of fanciers. We cannot at the moment say who has them. The idea of using them to capture ground pests has been mentioned, but we have never heard of actual trial.

### Sacaline Once More.

TO THE EDITOR:—I send you a page from an old catalogue with an account of what promises to be a wonderful forage plant for California. Has it ever been tried, and with what results?—T. M. SMITH, San Diego.

It is the old sensational fraud, sacaline, which was boomed a few years ago with great zeal and which proved to be worth nothing as a forage plant. It is a fair ornamental plant for large lawns, but otherwise is of no account.

### Hay for Cows.

TO THE EDITOR:—Will you please inform me, what hay is the best for milch cows, either barley, wheat or oats, and where I can get smooth brome grass seed?—DAIRYMAN, Placer county.

Of the hays mentioned, oat hay is probably best on all accounts but there is little difference between wheat and oat hay. Whichever is used there should be alfalfa or clover, either green or as hay, to furnish more protein, which is a leading factor in milk pro-

duction. In fact alfalfa can be used with straw, and alfalfa hay is better than grain hay for milch cows if it can be used with silage or corn fodder, straw or something else to supply the carbohydrate substances more cheaply than grain hay does.

## WEATHER AND CROPS.

Report of the U. S. Weather Service for Week Ending December 10, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

### COAST AND BAY SECTIONS.

The weather has been generally favorable for farming operations during the week, with nearly normal temperatures and heavy fogs in some sections. Light frosts have occurred in many places, but no damage has been done. The soil is in excellent condition. Plowing and seeding are in progress, and a large acreage of grain is being sown. Green feed is becoming plentiful in all sections; much alfalfa is appearing in pastures. Tree pruning continues. Oranges are being gathered and shipped. Olives are ripening slowly, but will yield a heavy crop.

#### SACRAMENTO VALLEY.

The temperature has been several degrees below normal during the week, and heavy fogs have prevailed most of the time. Frosts have occurred in the foot-hill and mountain districts, but no damage has been reported. The fogs have been principally confined to the valleys or low lands, and have doubtless had a tendency to prevent frosts in those places, as the temperature has been near the freezing point. Early sown grain is in good condition and making rapid growth. Green feed is abundant. The soil is in excellent condition, and plowing and seeding are in progress. The cold fogs have retarded the development of oranges. A heavy crop of olives is being gathered.

#### SAN JOAQUIN VALLEY.

Abnormally low temperature and heavy fogs have prevailed during the week. The dense fogs have been beneficial in retaining the moisture in the ground, and the soil is in excellent condition except on the low lands in some sections. Plowing and seeding are progressing rapidly, and a large acreage of grain is being sown. Early sown grain continues thrifty. Green feed is abundant. Farmers are greatly pleased with the prospect for heavy crops. Orange picking has been somewhat retarded by the fogs.

#### SOUTHERN CALIFORNIA.

The weather has continued warm and clear, with drying winds in some sections. The abnormally high temperature has caused fruit buds to swell, and there is some fear of damage to next season's crop. Cooler weather and rain would be beneficial. Early sown grain is making good growth and looks well. Pasture is plentiful. Plowing and seeding are progressing. Orange picking and shipping continue. The water supply was greatly improved by the November rains.

LOS ANGELES SUMMARY.—Weather generally favorable for growth of vegetation, except that the warm, dry weather is forcing deciduous fruit buds and drying the soil. Rain is needed soon. Plowing and seeding are in full progress on large acreage.

EUREKA SUMMARY.—The soil is drying rapidly, and in some localities farmers are busy plowing. Pastures are green and growing finely.

### Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Dec. 12, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week..... | Total Seasonal Rainfall to Date..... | Total Seasonal Rainfall to Same Date..... | Average Seasonal Rainfall to Date..... | Minimum Temperature for the Week..... | Maximum Temperature for the Week..... |
|----------------------|----------------------------------|--------------------------------------|-------------------------------------------|----------------------------------------|---------------------------------------|---------------------------------------|
| Eureka.....          | .00                              | 14.93                                | 23.97                                     | 11.68                                  | 40                                    | 58                                    |
| Red Bluff.....       | .00                              | 6.63                                 | 7.79                                      | 7.16                                   | 36                                    | 54                                    |
| Sacramento.....      | .00                              | 6.70                                 | 7.82                                      | 5.02                                   | 38                                    | 48                                    |
| San Francisco.....   | .00                              | 5.85                                 | 8.10                                      | 5.88                                   | 42                                    | 54                                    |
| Fresno.....          | .00                              | 5.10                                 | 3.92                                      | 2.37                                   | 36                                    | 54                                    |
| Independence.....    | .08                              | 2.22                                 | 1.22                                      | 1.71                                   | 32                                    | 66                                    |
| San Luis Obispo..... | .00                              | 8.66                                 | 5.93                                      | 2.61                                   | 84                                    | 40                                    |
| Los Angeles.....     | .00                              | 6.79                                 | 2.51                                      | 4.16                                   | 46                                    | 84                                    |
| San Diego.....       | .00                              | 1.73                                 | 1.28                                      | 1.99                                   | 48                                    | 78                                    |
| Yuma.....            | .00                              | .02                                  | .58                                       | 1.42                                   | 36                                    | 80                                    |

THE important announcement was made by the U. S. Consul at Malaga that the shipment of Almeria grapes to this country will be 50,000 barrels less than last year. In 1899 the Almeria crop amounted to 800,000 barrels. This year up to the 15th of September, the promise was even better than usual, and it was estimated that fully 1,000,000 barrels would be gathered. Unfortunately, beginning on the 15th of September, the provinces of Malaga and Almeria were visited by a succession of rain storms, which wrought great damage to the Malaga raisin crop and considerable loss to the Almeria grape crop. But the loss in the province of Almeria was not so great until the inundations of October 20, 21, and 22 swept down upon the great vineyards. Not only were the grapes still on the vines much impaired in quality, but there was a large outright loss.



## HORTICULTURE.

## The California Smyrna Fig.

By GEORGE C. ROEDING of Fresno at the Fruit Growers' Convention.

There is an old saying, "Enjoy life under your own vine and fig tree," which is indicative of the many attractions of California horticultural life. No fruit tree has adapted itself so universally to such a variety of soils and climates as the fig. Hardly a yard in our country towns, or a ranch, although it may be devoid of other trees, that is not adorned with a few fig trees, appreciated not only for their beneficent shade and easy culture, but for their fruit as well, which is so palatable and nutritious in so many different forms.

In the interior valleys the fig is one of the attractive features of our rural landscapes. Despite the fact that it is common from one end of the State to the other, no tree is so little understood—has been the cause of so much misunderstanding or discussion—as this very common fig tree.

WHAT IS A FIG?—Do you ever see its flowers? To the layman it simply represents a mass of pulp enclosed in a thin skin. To the botanist the outer covering is a receptacle for the thousands of inconspicuous flowers, and the whole is called an inflorescence.

What is a Smyrna fig, and in what respect does it differ from other figs? The general character of the tree and fruit is apparently the same as in other figs, and the only guide a grower has that his trees may possibly belong to the Smyrna class is that their fruits never mature.

A proper understanding of the subject can only be arrived at by dividing the edible fig (*Ficus carica*) into three classes: (1) The Wild or Capri, (2) the Smyrna, (3) the Adriatic, these being distinguished from one another by their flowers, viz., male, female, gall and mule flowers.

THE WILD OR CAPRI CLASS.—It is from this class, undoubtedly, that all species of edible figs sprung, and the improved fruit is the result of years of cultivation and hybridization. The only value this class of figs possesses is to furnish a home for the minute wasp, *Blastophaga grossorum*, for it is only in it that the insect can breed and exist.

It produces three crops annually, the first being known as profichi, pushing out from under the current season's wood in March and maturing in June; the second crop, known as mammoni, budding out as the first crop ripens and maturing in August; and finally the third—or second mammoni—crop, making its appearance as the first mammoni ripens, and matures from October to December, part of which crop remains dormant on the trees during the winter and not ripening before April of the following year. The insect during this period remains in the galls in the larva state. The Capri figs contain three kinds of flowers—male, female and gall flowers—the number varying in a greater or less degree in the several crops; but there is only one crop which produces an abundance of male or staminate flowers, and that is profichi, so, consequently, this is the only one of any value to the Smyrna class. The succeeding crops serve only as a habitat for the fig wasps.

SMYRNA CLASS.—This embraces all varieties of figs which do not mature without the agency of the insect or by artificial pollination. Two distinct crops are produced annually, both of which contain female flowers, the first appearing on the current year's wood in March and maturing in June, called brebas; the second, on the new wood just as the former is ripening. Only a few of the brebas mature, the bulk of them dropping to the ground when quite small, and those which do mature, although large, contain nothing but hollow seeds and lack flavor and substance. Their character can never be changed, for when their flowers are receptive there are no pollen-producing Capri figs.

The second crop commences to mature in Fresno county during the middle of August and continues to ripen up to the middle of October, although the crop is practically harvested in September.

ADRIATIC CLASS.—This embraces all sorts which mature their fruits without the agency of the insect, and they can never be improved, for they contain malformed female or mule flowers, which can not be fertilized.

There are a hundred or more sorts of this class growing in California. Among them are included the Old Mission, or California Black, White Adriatic, Brown Turkey, etc.

The White Adriatic has been more extensively planted for drying purposes than any other, but it is admitted by all having a knowledge of figs that it has nothing to recommend it, no matter how manipulated or processed, nor can it ever be made to compare with the imported fig of commerce.

So well is this fact known that our figs are rushed to the Eastern market as rapidly as possible, so as to take advantage of a bear market, the trade recognizing the fact that California figs are very slow sale when the imported article makes its advent.

CAPRIFICATION.—The Capri fig stands in the relation of male to the Smyrna fig, although from the preceding remarks it will be understood that it is

only in one crop that male flowers are produced in a quantity to be of any value.

Now follows the insect in its various stages. It over-winters in the second mammoni crop and emerges in April. The male insect, which is wingless, issues from the gall first—it never leaves the fig. Crawling around, it locates the galls containing the females, makes an opening with its powerful mandibles and impregnates them and then dies.

The female enlarges the opening made by the male, crawls through the orifice of the fig, which is then open, and flies to a profichi fig, the gall flowers of which are then ready to receive the egg. Note the fact that this is in April, and that this is the very same fig whose staminate or male organs do not mature before June. The insect forces its way into the fig, using a saw-like protuberance under the thorax for that purpose, and losing its wings in the operation. Once inside, it crawls around and deposits one egg in each of the ovaries of the gall flowers.

The insects in these galls mature in June. The females in this instance, in passing out of the fig, go through the zone of male flowers surrounding the orifice, which are then mature, and get their bodies and wings dusted with pollen.

During the past season the caprification of the Smyrna fig orchard at the Fancher Creek nurseries was conducted under the able supervision of Mr. E. A. Schwarz of the Division of Entomology, Department of Agriculture, Washington, D. C.

HOW IT WAS DONE.—In order that the work should be expedited the men were divided into three crews. One crew picked the figs and where they were beyond reach they were pulled off with a light bamboo pole, having an iron loop at one end; another sewed the figs on strings of raffia, from two to four figs on each string, while the other crew was kept busily engaged in hanging the figs in the Smyrna fig trees, from twelve to twenty figs being suspended in each tree. Only about one-fifth of the 4200 Smyrna trees were caprifigged. A large number of figs were not pulled, so that the first mammoni crop should be fully supplied with insects.

The insects do not all issue in one day, but the flight lasts over a period of from five to eight days, from fifteen to fifty insects issuing from each fig daily, occurring chiefly during the morning hours. The female, having selected a Smyrna fig suited to it, goes to the orifice and forces its way in, losing its wings in the same manner as when it enters the Capri fig. Once inside, it endeavors to lay its eggs, but the styles of the female flowers are so long it is unable to do so, but in its vain efforts to find a depository for them it crawls around in the fig, fertilizes the stigmas of the female flowers then in the receptive stage, and thus, although it sacrifices its own life, and fails to propagate its species, it paves the foundation for the propagation of new fig trees, from the fertile seeds which are produced and which could otherwise only be raised from cuttings, and as well as for bringing to perfection a fig which can well be named "a king" among its kind, and which without its aid would dry and shrivel up.

Having provided for the figs which delight the palate, we again turn to our valuable little friend and carry it through to its winter quarters.

THE INSECT IN THE WINTER.—From the profichi figs remaining on the Capri fig trees, the insects pass into the mammoni crop, carrying pollen on their bodies and wings, fertilizing the isolated specimens of female flowers, depositing their eggs in the gall flowers and then perishing, having in this case not only propagated their own species, but having been the means of providing for the propagation of new Capri fig trees from the fertile seeds which the fig contains. The first mammoni crop matures in August, and the wasps pass from this to the second mammoni. The crop ripens from Oct. 15th to Dec. 1st. As stated before, many of the figs—and there are between 30,000 and 40,000 on my Capri trees to-day—will remain green and dormant during the winter months. The figs which do mature are of two classes—those which contain nothing but female flowers, the insect being entirely absent, known as pulpy figs, and, although edible, are rather insipid, and those producing a normal fig, from which the insects issue the same as in prior crops.

Nature evidently lost a link in permitting this fourth generation to issue, for the greater part are lost, there being but very few young figs, and, from a practical standpoint, no figs for them to enter. I beg to call attention to the fact here that the word mamme, meaning the last crop of Capri figs, has by common consent of Mr. Schwarz and myself been discarded, as not fitting the conditions with the Capri figs here.

DEVELOPMENT OF THE SMYRNA FIGS.—The metamorphosis of the caprifigged Smyrna figs is one of the striking features in connection with this subject. Within a week after the Smyrna fig has been pollinated, it is readily distinguishable by its healthy green color, absence of ribs and firmness. The unfertilized fruits are of a dull yellowish green, the ribs are distinctly outlined, and when pressure is exerted the fig collapses.

GATHERING AND DRYING.—The theory so often advanced by correspondents from Smyrna, as well as by others who claim to know something of this fig in its native home, that it lacked flavor, in fact, was

tasteless in the fresh state, has been amply controverted; during the past season, it being universally conceded that the Smyrna fig in its fresh state surpasses anything in the fig line ever produced in California, and as one well known writer says: "Cut in two, a ripe Smyrna fig seems completely filled with a solid, almost water-white jelly, in parts appearing not unlike strained honey, while throughout the mass are seeds—and the seeds in this case are fertile—each a small, perfect nut and not, as with common varieties, an empty shell."

No fig is more easily or inexpensively handled than the Smyrna. The figs should never be picked, but should be allowed to drop to the ground of their own accord; if picked from the tree, the resultant product lacks flavor, substance and richness of pulp, the three characteristics placing this fig preeminently in the lead of all others. The fallen figs are gathered from the ground every other day and then transferred to the drying ground, where, before placing on the trays, they are dipped in a boiling hot brine, which gives them a glossy appearance and hastens drying. They are never sulphured, as the fig has a skin which is naturally white, and, even if it had not, no sulphur would be used, as this pernicious practice, although giving the figs a fine appearance and catching the eye, gives it a sour, acrid taste, and has done more to injure the sale, from a consumer's standpoint, of California figs than anything else in connection with this industry. The figs are practically dry when they fall, so that two or three days' exposure is all that is necessary. The figs are turned daily on the trays by placing an empty one over a filled one, and with a dexterous twist of the hand the figs are transferred to the empty tray. No particular attention is necessary as to the manner in which the figs are placed on the trays, or whether the figs touch each other or not. Trays with slats with spaces in between should be used in preference to all others, as they permit a free circulation of air, and the figs in consequence dry more evenly. To determine the proper degree of dryness, take a fig between the fingers in the early morning before it has become warm, and if it has a leathery feeling to the touch, or if the neck of the fig is found to be dry, no further exposure is necessary. The danger with the inexperienced workman would be to overdry, for the reason that the figs are so meaty and full of substance that it would lead one to believe that the fig was not fully dried when it really was.

AFTER TREATMENT.—Before placing the figs in the sweatbox the workman should go over the trays, carefully sorting out all insufficiently dried figs for further drying. Pack the figs tightly in the sweatbox so that they will go through a sweat and the moisture will be equalized.

They should occasionally be transferred from one box to another; a far better method, however, is to place them in a close room, on a clean floor, turning them every few days with a scoop shovel. After three weeks they are ready for packing. Before packing they should be washed in a trough containing a strong cold brine; all floating figs should be removed, as they are either improperly fertilized or overdried, and for this reason are inferior. Those remaining should receive a good rubbing between the hands, to remove all the dirt, then placed on trays and exposed to the sun for a few hours, to permit the surplus moisture to evaporate, when the figs are again placed in boxes preparatory to packing.

PACKING.—This work was performed entirely by girls, and the product, something over six tons, was packed in a similar manner to all California figs. An entirely different and distinct plan of packing will be adopted in the future, so that the California Smyrna figs will have some prominent characteristics to distinguish them from the imported as well as the inferior home product.

VARIETIES.—There are growing on the Fancher Creek nurseries seven distinct varieties of Smyrna figs; one is purple or black, another is grayish green, bringing another point to the notice of our horticulturists—that there are other figs besides the White Smyrna. The value of many of these varieties for drying purposes has not been fully determined, not enough being produced during the past season. That the California Smyrna fig is deserving of a place of honor is evidenced by the fact that a recent analysis made at the Agricultural Department of the State University showed that this fig contained 63.92% sugar, which was almost 2% more sugar than found in the best grade of the imported article.

There are also three distinct varieties of Capri figs growing on the place, the names of which are not known, and they have therefore been designated by numbers: No. 1, No. 2 and No. 3. The idea which has been presented by several scientific men, who have made a study of this subject in the old country, that it was necessary to have an assortment of Capri trees to produce the several crops and carry through the successive generations of insects, is not borne out by our experience here, as it has been found that all three varieties are very prolific bearers of the profichi crop, and that the No. 1 variety is capable of producing all the crops required for the successful propagation of the insect; the other two varieties are rather uncertain bearers of the mammoni and second mammoni crop.

Each variety has some point in its favor, however.



No. 1 is the first to mature its profici figs, so that the first Smyrna figs in the receptive stage receive the benefit of this pollen; the No. 3 is the next one to mature this crop, and it is particularly valuable on account of the large size of the fruits, containing more galls with insects than either of the others; the No. 2, which matures last, prolongs the season of capricification of the Smyrna fig.

In addition to the varieties growing at the Fancher Creek nurseries, there are also five or six others growing at the California Nursery Company's plant at Niles, some of them having been introduced by Mr. John Rock and the others by Dr. Gustav Eisen.

When all these varieties are brought together and are growing on one place, many new and important developments will no doubt be brought to light.

**RECOMMENDATIONS.**—In planting an orchard of Smyrna fig trees, none should be closer than 25 feet, and even at this distance on ordinary good soil it will be necessary after fifteen years to cut out every other tree. Capri trees should be planted in a group by themselves in the orchard, and not planted in one row, if the best results are to be obtained.

**FUTURE OF THE INDUSTRY.**—The successful culture of the California Smyrna fig means much for this State; it means that a new industry has sprung to life, that thousands of acres of land unavailable for other purposes will be open for cultivation, and last, but not least, it means a permanent increase in California's annual income.

## THE IRRIGATOR.

### The Great Irrigation Problems of the West.

From the Presidential Address of PROF. ELWOOD MEAD at the recent National Irrigation Congress.

The Irrigation Congress had its origin in the conviction of a few thoughtful minds that the industrial possibilities of the West were not appreciated, that reclaiming lands and dividing rivers among users were inadequate to the needs of the future. It was necessary to arouse public sentiment in order to secure needed reforms of National and State laws and the Congress was inaugurated for that purpose. As it has been an effective agent in accomplishing this result it seems appropriate that the president's address should review briefly its history and purposes.

**LOOKING BACKWARD.**—The first Congress met at Salt Lake City nine years ago and was a great gathering in numbers, enthusiasm and public spirit. Seventeen States and Territories were represented by some of their ablest and most influential citizens. It is a matter of regret that so few of the earlier leaders are with us at this meeting. It is a pleasure to recognize the continued interest of Congressman Newlands of Nevada, who was one of the zealous advocates of public irrigation at the first meeting as he is at this one. We miss the presence of Wm. E. Smythe, for many years chairman of the executive committee and who carried the Congress through its trying period of doubt and uncertainty, as we do Judge Emery of Kansas, the venerable and enthusiastic advocate of National aid, and Senator Warren of Wyoming, who was as discriminating a friend of Western development in the first Congress as he has since been in a more important one. It would add much to the interest and value of this gathering if Judge Rogers of Colorado, Wm. H. Mills of California, and Judge Goodwin of Utah, who were so conspicuous in the first meeting, could give us the benefit of their later experience.

The discussions of the first Congress showed the need of such a gathering and of giving increased attention to the problem of irrigated agriculture. It was pointed out that the best results in other countries have come from the union of land and water. We have at the very outset divorced these two elements of fertility, since the General Government controls the public land and the States the water supply. It was shown that in a majority of the arid States there are more than ten acres of grazing land for every one acre which can be irrigated, and that the problem of protecting the pasture lands is of equal importance with that of utilizing the water supply; that there was not then and is not now a single law which makes any provision for such protection.

The first Congress urged as a remedy for these evils the cession of the public lands to the States. It was urged in behalf of such action that irrigation is a western problem and that since the control of the water supply had passed to the States the control of the lands should follow and that to do this would be to secure a higher degree of intelligence and greater expedition in putting both to use than would be possible with an administration located in Washington.

**THE REFERENCE TO THE STATES.**—For several years succeeding Congresses followed closely the recommendations of the first one, urging the improvement of water laws by the States and aid from the General Government by donations of land. Acting on what seemed to be the settled conviction of the arid region several bills providing for the cession of the arid and

grazing lands were introduced in Congress. Perhaps the most elaborate of these was the one introduced by Senator Warren, of Wyoming, which provided for a cession of the irrigable and grazing public lands in trust to the several States and required the States to dispose of the lands which could be irrigated in small tracts to actual settlers, to lease the grazing lands to the owners of contiguous irrigated farms, and to expend the funds arising from the sale of irrigable lands and leases of pasture lands to the construction of irrigation works. It was a clearly thought out and statesmanlike solution of the irrigation question, based on the idea that each State was to solve its own problems. If it had been promptly enacted at the time of its introduction it would have averted many evils which have since arisen. It failed because it was a quarter of a century in advance of public opinion in the West. The revolution in existing conditions which it provided for was too great. It was opposed by stockmen because of its interference with the open range. It was not favored by those who believed in National control of irrigation or aid by appropriations from the National Treasury, and it was opposed by those who doubted the capacity of the States to deal with the important interests which this would commit to their charge. Although the bill failed to become a law it has had an enduring influence on irrigation thought. It ended the policy of doing nothing. The solution which it presented was one which all could understand. If it was not accepted, it rested with those who opposed it to present a substitute. This was not as easy as it seemed and since that time the West has been studying this subject as never before.

While no question has yet arisen of greater importance than the necessity of securing such changes as will unite land and water under one control, other questions have relegated this to a subordinate position. For one thing many States do not seem to want the lands; they prefer to have the nation retain control and provide the means for their improvement. It is now realized that watering these deserts is not solely a problem for the States; that the nation has certain duties and responsibilities and that there are certain questions which require national legislation and oversight. The need of national laws grows out of the fact that there are certain matters which only the nation can deal. The nature of these problems can only be briefly outlined.

**MORE THAN A STATE QUESTION.**—Near the southern corner of Yellowstone Park rises a lofty peak which has been appropriately named Mount Union because it is the starting place of the future civilization of the West. Down its lofty sides flow three streams which, with their tributaries, furnish the water supply for a region larger than many European countries, and which in the future is destined to be the home of unnumbered millions of people. These streams are the headwaters of the Missouri, the Columbia and the Colorado. The first will in time irrigate a large part of Wyoming, Montana and the Dakotas. The second, southern Idaho and eastern Oregon; while the third finds its lonesome way through the canyons and deserts of Colorado, Utah and Arizona. One finally empties into the Gulf of Mexico, another into the Pacific ocean, and the third into the Gulf of California. The valleys of these rivers are now chiefly occupied by the owners of range flocks and herds, but this industry if continued for a thousand years would not increase their population or productive capacity. If, however, their waters are diverted, homes can be made for more people than now live east of the Mississippi river. To successfully accomplish this result requires something more than donations of land or appropriations of money. These are essential, but with them should go laws for the creation of institutions needed to bring human settlement into harmony with its environment. This requires new laws for the distribution of the irrigable lands to the people; the present land laws are not suited to this purpose. The waters of these rivers will have to be divided between the States. There is no law for doing this and conflicts between States are threatened.

The canals already built supply water to thousands of farms. The canals and reservoirs to be built will add hundreds of thousands of others. The water needed to fertilize these farms must be distributed so that each man will receive his proper share no matter how far removed from the mountain supply he may live. In many parts of the West the public lands are overstocked and the grasses which now feed flocks and herds are threatened with destruction. Legislation is needed to preserve these. Each one of these rivers is navigable along some portion of its course. The respective rights of irrigation and navigation need to be defined. In some of the States the doctrine of riparian rights prevails. This, if strictly enforced, would prevent the diversion and use of any of the supply. This complication must in some way be removed.

**A NATIONAL CONCERN.**—The work which lies before us is beyond the means of local effort or individual enterprise. The adjustment of the diverse and conflicting interests of individuals, communities and different States requires not only wise and national laws but administrative ability of high order in their execution. The framing of these laws is a task which ought not much longer to be deferred. Al-

ready grave complications have been created through neglect to recognize the inevitable necessities of the future. In some of the States efforts to enlist private capital have resulted in laws which make water a speculative property. In others, efforts to control the public range by stockmen have led them to acquire miles and miles of the irrigable water front because control of the water gives control of the land. The owners of this land are doing nothing for its improvement. They would, no doubt, be perfectly willing to have the Government appropriate funds for its reclamation, but if this is done the land owner should be taxed with part of the expenses. There is certain to be an objection to any plan which does not provide for this.

**WHAT IS BEING DONE.**—Year after year the sessions of the Irrigation Congress have been devoted to a discussion of these questions. For several years it urged as a means of solving these the creation of a national commission whose duty it would be to study the land and water problems of the West and outline a policy which would define the limits of State and national jurisdiction and hasten adequate action by each. While nothing directly came of this, the agitation bore fruit in another direction. Western Representatives in Congress, responsive to the needs of their section, found it easier to utilize existing agencies than to create new ones, and have enlisted a number of the departments of the General Government. In the Interior Department the Geological Survey is gauging streams and locating and surveying sites for storing water. The War Department has prepared an able and exhaustive report in favor of the policy of Government construction of reservoirs. The Department of Agriculture is investigating the methods by which water can be more economically used, and the laws for its distribution and control made more effective. Forest reserves are being established and forest protection has become a recognized feature of the National Government. The resolutions of the last two meetings of the Congress have shown a growing tendency towards the extension of national aid. Public sentiment is being actively exerted in favor of appropriations of money from the National Treasury for the construction of storage works and the building of canals of too great magnitude or cost for private enterprise. If this is to be done it should be under such conditions as will certainly unite with the ownership of land its share in the stream on which its value depends. This would mark the beginning of an economic reform of great significance. The benefits of such united ownership would be more potent than precept or argument and would insure the reform of existing laws which make the speculative control of streams and the divided ownership of land and water possible. The last two sessions of the Congress have made a resolution in favor of the union of land and water a prominent feature of its declaration of principles and it is hoped that the position of this Congress will not be less certain and emphatic.

**THE FUTURE.**—In conclusion it may be stated that the Irrigation Congress has been the forum in which the best thought of the West has found expression in its efforts to define the limits of State and national legislation, to aid in every way the enactment of wise laws so that development when it proceeds shall be peaceful and orderly. The accomplishment of this result is one of the mighty tasks of the future. If successful it means the creation of a new agricultural empire, an immense increase in our national wealth, and securing better material conditions for millions of people.

## THE DAIRY.

### Value of a Dairy Herd Record.

Gordon H. True of the Arizona Agricultural Experiment Station has, with the co-operation of two dairymen, made a very interesting and suggestive showing of how to find out which cows pay for their keeping, and how much they paid. He claims there is a necessity of testing and keeping a record of the product of the individual cows of the herd. In order to demonstrate this necessity when intelligent management of the herd is attempted, he has kept such a record of two herds during the past year, following the plan that he would recommend for general practice.

**HOW IT WAS DONE.**—The milk was weighed and sampled at every milking and the samples tested twice a month, Mr. True testing the milk and keeping the record as his share of the work. The owners of the herds state that the extra time required to weigh the milk, record the weight and take the samples did not exceed one minute per cow. The samples tested every two weeks were composite samples, consisting of a part of the milk from each milking during the two weeks, and were kept in condition for testing by the addition of bichromate of potash and bichloride of mercury in about equal parts. The time required for testing the samples for the two herds was about half a day.

It was the original idea to secure herds fairly representing the different breeds used for dairy purposes, but the men owning the Shorthorn and Hol-



stein herds failed to co-operate when the time came to begin the test. Of the two herds of which records were kept, one consisted of twelve full-blooded Jerseys and the other of thirty-five cows of mixed breeding, some being high-grade Shorthorns, some grade Jerseys, and others of various admixtures of blood. Of this latter herd, thirty cows completed a year's record, which is given below. This record speaks for itself and demonstrates—what a similar record of any dairy herd will demonstrate—that it pays to keep a record:

#### A YEAR'S RECORD OF DAIRY HERD.

| Number of cow | Age | Days in milk | Pounds of milk | Per cent fat | Pounds of fat | Gross receipts | Net receipts |
|---------------|-----|--------------|----------------|--------------|---------------|----------------|--------------|
| 1             | 5   | 357          | 7,978          | 4.36         | 348.74        | \$73.25        | \$41.25      |
| 2             | 10  | 335          | 8,727          | 3.66         | 319.13        | 67.02          | 35.02        |
| 3             | 7   | 315          | 7,294          | 4.28         | 311.75        | 65.48          | 33.47        |
| 4             | 12  | 350          | 6,614          | 4.45         | 294.82        | 61.91          | 29.91        |
| 5             | 5   | 365          | 6,433          | 4.38         | 282.99        | 59.43          | 27.43        |
| 6             | 8   | 330          | 5,363          | 4.85         | 258.96        | 54.38          | 22.38        |
| 7             | 5   | 333          | 5,383          | 4.72         | 254.36        | 53.42          | 21.42        |
| 8             | 5   | 351          | 6,351          | 3.98         | 253.31        | 53.20          | 21.20        |
| 9             | 15  | 288          | 7,770          | 3.25         | 252.42        | 53.01          | 21.01        |
| 10            | 7   | 284          | 7,052          | 3.4          | 239.85        | 50.37          | 18.37        |
| 11            | 5   | 365          | 5,118          | 4.66         | 238.55        | 50.10          | 18.10        |
| 12            | 7   | 256          | 5,305          | 4.5          | 238.38        | 50.06          | 18.06        |
| 13            | 4   | 291          | 4,459          | 5.28         | 235.74        | 49.51          | 17.51        |
| 14            | 3   | 343          | 5,862          | 4.02         | 235.74        | 49.51          | 17.51        |
| 15            | 5   | 315          | 4,951          | 4.75         | 234.34        | 49.21          | 17.21        |
| 16            | 7   | 345          | 5,940          | 3.73         | 221.27        | 46.47          | 14.47        |
| 17            | 5   | 365          | 4,855          | 4.51         | 219.21        | 46.03          | 14.03        |
| 18            | 3   | 338          | 4,327          | 5.01         | 217.02        | 45.57          | 13.57        |
| 19            | 7   | 228          | 4,766          | 4.49         | 214.27        | 45.00          | 13.00        |
| 20            | 4   | 233          | 5,434          | 3.89         | 211.12        | 44.34          | 12.32        |
| 21            | 7   | 344          | 4,470          | 4.69         | 209.53        | 44.00          | 12.00        |
| 22            | 15  | 271          | 6,727          | 3.07         | 206.31        | 43.33          | 11.33        |
| 23            | 6   | 311          | 5,041          | 3.94         | 198.57        | 41.70          | 9.70         |
| 24            | 7   | 241          | 5,838          | 3.36         | 196.19        | 41.20          | 9.20         |
| 25            | 7   | 285          | 4,239          | 4.53         | 191.94        | 40.31          | 8.31         |
| 26            | 8   | 319          | 4,180          | 4.41         | 184.14        | 38.67          | 6.67         |
| 27            | 4   | 365          | 3,964          | 4.41         | 174.74        | 36.70          | 4.70         |
| 28            | 3   | 342          | 3,741          | 4.39         | 163.70        | 34.48          | 2.38         |
| 29            | 4   | 305          | 3,559          | 4.43         | 157.87        | 33.15          | 1.15         |
| 30            | 5   | 335          | 3,126          | 4.51         | 141.13        | 29.64          | -2.36        |

**THE CALCULATION.**—In addition to the record of the pounds of milk and butter fat produced by each cow, there was calculated the comparative profits returned by the different animals. The gross receipts have been determined by multiplying the pounds of butter fat by twenty-one—21 cents per pound being the average price paid for butter fat at the creamery receiving the milk. The net receipts have been calculated by subtracting \$32—the estimated cost of pasture and milking—from the gross receipts. The skim milk should pay for hauling to the factory, at least. No attempt was made to determine the value of the calf for each cow. The bull calves and the heifer calves from the least valuable cows would about pay the interest on the money invested in their dams, while the heifers from the best cows might be worth more.

In order to intelligently compare this herd with others, it may be stated that the average gross receipt per cow per month was \$4.25. The average per cow for the Jersey herd tested was \$4.66. There were one or two other herds supplying milk to the same creamery probably averaging higher than \$4.25, and possibly higher than \$4.66, but the number of cows in milk was not reported for the twelve months, so that their averages were not exactly calculated.

**THE HERDS.**—One herd reported for nine months gave a monthly average of \$1.49 per cow, and the fact is sad but true that figures are available showing that there are too many such herds in the Territory. Eight herds reporting the number of cows milked every month show the following averages per cow:

|            |        |            |        |
|------------|--------|------------|--------|
| No. 1..... | \$4.25 | No. 5..... | \$3.61 |
| No. 2..... | 3.94   | No. 6..... | 3.56   |
| No. 3..... | 3.85   | No. 7..... | 3.25   |
| No. 4..... | 3.77   | No. 8..... | 3.24   |

It seems as though it would be a good idea for the readers of this article who have dairy herds to sit down and add up the amounts of their creamery checks for the year, divide the sum by twelve and then by the number of cows in their herds, compare the average with that given above, and ask themselves how many unprofitable cows they think they own, and how they think they are going to pick them out.

**THE VALUE OF A COW.**—In connection with a study of the accompanying table, the following points might be emphasized: The value of a dairy cow is not determined by the blood she is supposed to possess, unless that blood is of ancestors that are known to have produced butter fat at a profit. The cow that heads the list in the table is a grade Jersey, while the one standing next is a high-grade Shorthorn. The best cow in the full-blood Jersey herd tested gave a net return of \$41.42, but 17 cents more than that of the grade in the other herd. The cow standing second in the Jersey herd was outranked by three grades in the other herd, including a grade Short-

horn; and there were twenty-six grade cows better than one of the full-blood Jerseys.

The value of a cow is not to be estimated by the amount of milk she gives. While it will be observed that the heaviest milker in the herd is the second best cow, and the cow standing second in milk ranks first in profit, it will also be seen that the cow standing sixth in the amount of milk given is twenty-sixth in profit.

The value of a cow is not to be estimated by the richness of her milk. Eighteen cows tested higher than the best cow in the herd, this number including the six poorest ones; and twenty-five tested higher than the second best cow. It is pounds of butter fat, and not per cent, that count.

The comparative value of the cows in a herd is not to be based upon the gross but upon the net receipts. Compare cows No. 1 and No. 27. No. 1 gave practically twice as much milk of about the same richness, and is, therefore, you will probably say, twice as good a cow as No. 27. Is this true? Look at the net receipts. No. 1 returned \$41.25 and No. 27 \$4.70, from which it is easy to calculate that instead of being twice as good a cow as No. 27, No. 1 is nearly eight and one-half times as valuable.

One cow, it will be observed, failed to pay expenses. How are such cows as No. 30 and some of her neighbors on the list to be weeded out of our herds unless the individual record is kept? If there is one such cow in a herd averaging \$4.25 per head per month, how many are there liable to be in herds averaging less?

In the matter of time this hint is certainly timely, coming, as it does, just long enough before the end of the year to give every dairyman time to make plans for keeping a record during the coming year.

## THE POULTRY YARD.

### The Guinea Fowl.

The guinea fowl has from time to time been advocated by our orchardists as a particularly desirable bird to catch orchard insects, but we doubt if there are many kept in this State. What can be said in their favor is well said by P. T. Woods in the Country Gentleman: I have had experience with guineas both on the farm and in the city, and it seems to me that this excellent fowl deserves more widespread popularity and should have the truth told about it.

**A NOISY BIRD.**—The guinea's worst fault is that it is noisy; there is no denying that. If anything, the white variety and crosses are less noisy than the pearl variety, but a good deal depends on how and where the birds are grown. Both males and females when excited or alarmed set up a harsh screech that sounds like a wooden cog-rattle gone crazy. The male's voice is harsher and louder than that of the female, his wattles are larger and longer and he has a strut peculiar to his sex. The female owns exclusively the cry of "buckwheat, buckwheat," or "come back," but there is nothing harsh or disagreeable about her cry and many people enjoy hearing it, even when it is sung during the small hours of a moonlight night. If housed, the birds are seldom noisy at night unless disturbed. They are light sleepers and are quick to make a racket if disturbed by night prowlers. The old males are sometimes, but not always, abusive to other fowl if kept in the same runs with them.

**DESIRABLE FLESH AND EGGS.**—The meat of the guinea is excellent, all dark meat, having a delicious flavor. They make fine eating up to two years of age for any style of cooking, and the older fowls make good potpie. There is no fowl that makes better eating.

The hen is an excellent layer, begins laying early, about the first of March, and lays almost every day until fall before going broody. The eggs are of fine flavor, are rather small and shaped something like a whip top, tinted a light brown and marked with dark brown spots. Many farms in the South keep large flocks of guineas in a half wild state to supply eggs and meat for home use. Some are marketed.

**HATCHING.**—The guinea hen does not make a good mother; she is too nervous, sits too late as a rule, and if allowed to bring up her young will make almost wild birds of them. The eggs can be hatched under hens or in an incubator, and the chicks raised by hen or brooder. The period of incubation is about twenty-six days, and may range from twenty-five to twenty-eight days. The chicks are active, wild little creatures, and are very strong on their legs and ready to run as soon as dry. Unless confined for the first few days, they are likely to stray and get lost. They are quite hardy and are easier to raise than turkeys. They can be quickly tamed and taught to do anything that other chicks will do. The same care and food used for other chicks will raise guineas successfully. Both old and young birds need rather more animal food than hen chickens. If brooder-raised, they are very tame and easily handled. The brooder must be kept clean and well aired and not allowed to get over-heated. (More brooder chicks of all kinds die from too much heat than from insufficient heat, anyway). Grown with a hen, they become very much

attached to their mother, and when full grown will follow her about and roost with her at night in the poultry house.

**BREEDING.**—One male is sufficient for four or five females, and sometimes a very active male will take care of a greater number. As more than one male can run with the flock without creating trouble, it is well to supply a male for every four females.

The fowls can be grown and kept in confinement, but adult guineas do best where they can have liberal range. If kept in confinement, the runs must be wired in on top, for guineas are great flyers. They can be kept in yards and houses and taught to roost and lay in any poultry house. After they have formed the habit of using the poultry house, they may be permitted to range the greater part of the time, without having much more trouble from stole nests than would be had with other poultry. On the farm, if allowed their liberty, they will do very little damage to crops, and will destroy millions of injurious insect pests. They will raise an alarm on the approach of strangers, hawks or marauders of any sort. If they are to be taught to lay in the poultry house, they must be trained when young and kept tame; the nests should be dark, and should be set on the floor, beneath the droppings board.

On range, the adult birds will forage for a large share of their living, feeding on insects and weed seeds. They should be fed in the poultry yard, night and morning, to prevent acquiring wandering habits.

Guineas will never become popular in the city on account of their noise, but for the benefit of any who may wish to try the experiment, I will say that I handled successfully a small flock of guineas in confinement on a quarter acre city lot, and know of a number of town lot poultry yards where they are kept in pens with other fowls, chiefly for their watchdog habit of raising an alarm when thieves approach. Every farm ought to have a flock of guineas to supply the home table with delicious meat and eggs at very small cost. There are undoubtedly great possibilities in raising guineas for market, for as soon as their table merit is more generally appreciated, there will be a good demand for birds and eggs. With proper management, guineas can be made to do almost anything possible with other sorts of nervous, active poultry. They are almost wholly free from disease, even when kept in confinement.

**LOS ANGELES COUNTY** does not propose to lose again by forest fires as she has the present year. It is stated that the authorities of the United States General Land Office at Washington have been astonished at the great cost of fighting fires in southern California. In fighting the fires in the San Gabriel reserve last summer the Government spent \$19,000, General Land Commissioner Hermann, when in Los Angeles last summer, gave his word that the Government would construct trails and fire brakes in the mountains provided the people of the county would put up money for the surveys. Funds have been subscribed by the city and by citizens, and those interested had decided to petition the Board of Supervisors to appropriate \$500. These amounts in the aggregate would pay for surveys sufficient to provide for many thousand dollars' clearing operations by the Government.

The latest addition to the much discussed subject of the origin of the Yosemite valley, Cal., is by H. W. Turner, a fine monograph just issued by the California Academy of Sciences. Mr. Turner's position and experience entitles his views to considerable credence, and in very extended discussion of the subject he inclines to the belief that the Yosemite valley "was formed by river erosion, facilitated by strong jointing."

**THERE** is nothing electric about "galvanized" wire. The process of manufacture is purely mechanical throughout. The wire, after annealing, is cleaned in dilute hydrochloric acid, then run through a trough containing a slightly stronger bath of the same acid, into molten zinc, then rewound, the superfluous zinc being wiped off as the wire leaves the bath, by means of asbestos or sand.

FOR shingling 4-penny cut nails are considered superior to 3-penny wire nails. The latter are the same size all through, and they rust out near the head by continual exposure, while the former has twice the amount of material near the head than at the point, and will last much longer. Iron nails are considered preferable to those made of steel.

IN figuring on electrical transmission and thus utilizing water power, where the question comes up of relative cost, it is to be remembered that in the case of building a dam and construction and maintenance of a reservoir, is involved a fixed investment, and one that is not ordinarily susceptible of being turned into money.

THE watt is the unit by which electrical energy is measured. It is calculated as being equal to the current of one ampere flowing at a pressure of one volt, i. e., a current of ten amperes with a pressure of 100 volts represents 1000 watts. A horse power is understood to be the equivalent of 746 watts.

A GOOD anti-friction metal is made of Banca tin 89%, antimony 7.4%, Lako copper 3.6%. The Government bought 20,000 pounds of that alloy last week, delivered at Washington, D. C., at 27½ cents per pound.



## Agricultural Review.

### ALAMEDA.

**AND NOW SALT IS CORNERED.**—Niles Herald, Dec. 6: The Federal Salt Co. has acquired complete control of the salt industry of Washington and Eden townships in its efforts to capture the entire output west of the Rocky mountains. As a result of this deal the price of salt has jumped from 95 cents to \$2 per bag. D. E. Skinner, president, and A. S. White, a director of the National Salt Co., which controls the salt output east of the Mississippi river, have been on the coast for some time, looking over the field, and recently began buying up the small concerns or contracting for their entire output for five years. The larger concerns were taken into the corporation, given stock in the Federal Salt Co. as payment, and the individual owners were given paying positions. The production of salt is one of the principal industries of Alameda county, and the works extend all along the bay shore from Mt. Eden to Newark. The oldest works are those of Plummer & Sons, the Crystal Salt Works at Newark, started in 1864, and the Turk Island Works at Alvarado, started in 1869. The latter was so named owing to the similarity of its product to that of Turk Island, in the West Indies. These plants produce annually about 7000 tons of table, dairy and commercial salt. The same firms have also under lease ground on which 3000 tons more are annually produced. Among other producers are the Carmen Island and Oakland, individual works of lesser capacity. This salt is all consumed west of the Rocky mountains and in the Orient, large consignments being made regularly to Russia, Japan, Aleutian Islands, British Columbia and Central America.

### BUTTE.

**ABANDONING SEEDLING ORANGES.**—Oroville Register: Growers in this section are realizing that Navel oranges are more profitable than seedlings, and as rapidly as possible they are changing their trees to Navels.

**PRUNES FOR EUROPE.**—Chico Record, Dec. 2: Three cars of prunes have been shipped from the Chico Packing House within the past three days for the European market. One car is destined for Mainz, Germany, another for Copenhagen, and the third for Antwerp, Belgium. This fruit will be taken in charge by the agents of the California Cured Fruit Association at these points. Manager Rice states that indications are good for a brisk movement of fruit during the next few weeks. There will probably be a cessation of the rush during the holiday season, to be followed by activity later on.

**BUTTE COUNTY ORANGES.**—Biggs Argus: This season, up to Thanksgiving Day, Butte county shipped about 150 carloads of oranges, 100 cars being supplied by the Palermo Colony orchards from lands which ten years ago were considered only an ordinary sheep range. These oranges reached the first and highest markets, and the owners, unlike the ordinary farmer, whose crops are harvested when the market generally is at a low price, received the proceeds of their enterprise and industry at a time when no other crop is in condition for market, thereby placing a large amount of money in circulation in the dull part of the year, when little other produce can be made ready for the market.

### COLUSA.

**COURT DECISION ON CONTRACTS FOR FRUIT.**—Some time ago D. H. Arnold of Colusa commenced an action in the Superior Court of that county against the Producers' Fruit Co., claiming damages because of failure to comply with the terms of a contract. Ten days' time was necessary in hearing evidence and the arguments of lawyers. The findings of the jury were for the plaintiff in the aggregate sum of \$906.11. Arnold claimed damages for the manner in which his prunes were handled by the Producers' Fruit Co., and that charges were made which were covered by the contract with said company. This is the second time this case has been tried, Arnold securing a verdict for damages each time. It is said defendant will appeal the case again, as the amount of money and principle involved seem to warrant it. Should damages be paid in this case, it is said there are several other prune raisers who would likely bring similar actions against the company on the same grounds.

### KINGS.

**REGARDING TULARE LAKE.**—Hanford Sentinel, Dec. 6: Water has been pouring into the lake bottom with the full capacity of the south branch of Kings river. No damage was reported, but there was fear if the run did not abate damage would result from the overflow. L. Y. Dollenmayer returned from a visit to that part

of the country, as well as the Summit Lake country, yesterday morning, and, in regard to the West Side, says the prospects never were any better than they are to-day for a general crop.

**BIG ACREAGE SEEDED TO GRAIN.**—Lemoore Leader, Dec. 8: C. M. Welch, a wealthy man of Merced, has just leased what is known as the home place on the big Jacob ranch, comprising some 6000 acres, and the work of seeding this big tract of grain is now in progress by a large force of men. A number of barns are being erected on the tract. The season being a favorable one, over 18,000 acres of this big ranch, which is under lease to Miller & Lux, has been rented to a large number of farmers, who, with their families, are now residing thereon and are seeding their respective tracts to grain.

### RIVERSIDE.

**TO NAME THE POMELO.**—Los Angeles Times: The Farmers' Institute, at its Riverside meeting, will consider the subject of nomenclature for the pomelo. This matter was taken up by this department three or four weeks ago, at the suggestion of A. P. Griffith, who was appointed later as a committee to confer with other pomelo men and, if possible, to devise means of systematizing the names to be applied to the different varieties of the fruit. Mr. Griffith now invites all who are interested in the pomelo to send samples to the Riverside meeting, with the local name of each variety attached for identification. It is hoped that this effort will arouse the growers of this fruit to action, and that what is done will be the means of placing the pomelo upon the market in such a style that the trade can identify what it considers the best varieties.

### SAN BERNARDINO.

**ORANGE SHIPMENTS LARGEST ON RECORD.**—Redlands Facts, Dec. 6: The packing houses are now all busy forwarding holiday oranges, some of them working at their fullest capacity. Never before has there been such a demand for Christmas fruit, and never has Redlands been so well prepared to furnish a good quality of oranges. The fruit is almost all well colored when packed, and, as has been demonstrated, will be in excellent color and of fair quality when it reaches the Eastern dealer. Last night the Southern Pacific took out of this city twenty-one cars of oranges. This is the largest number of cars this company has ever forwarded from Redlands in any one day at any season of the year. In these twenty-one cars there were 7642 boxes of fruit, of an approximate value of \$15,000.

**COLONIZATION MOVEMENT.**—San Bernardino Times-Index, Dec. 7: The residents of this city to the number of 100, who have organized a colonization scheme for the settling of a large area of tillable land in the District of Sonora, Mexico, met Tuesday for the purpose of appointing a committee to go to Mexico and inspect the land and make arrangements for the colonizers to leave this city for their new home. The colonization scheme is a large one, and means the taking up of not less than 270,000 acres of land. The land is reported to be good for tilling, is supplied with abundance of water, and situated in a country where the climate is favorable for the growing of vegetables, cereals and fruits.

### SAN LUIS OBISPO.

**APRICOT PITS SPOILED WITH SALT-PETER.**—Arroyo Grande Herald: Apricot pits have sold well this season, and now it appears that, rather than take the trouble to cure them properly before extracting the kernels, the packers have cracked them green and treated the damp kernels with saltpeter. The stuff has been rejected by the buyers.

### SANTA BARBARA.

**FINE APPLE CROP.**—Lompoc Record: The apple packing is drawing to a close; the bulk of this year's product being already in the packing-houses, and a rare good pack it is. Probably no cleaner, better or finer fruit ever went to market from any section of the United States.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian, Dec. 6: Some shipments of five-tier Newtowns have been made recently for European points.—Owing to a slump in the market, Eastern and foreign apple shipments were light this week, amounting to only nineteen cars. Total for the season, 501 cars.—The lull in shipping is giving packers more time for regrading and overhauling stock. The long warm fall left its mark on apples, and they have not been holding up as well as usual.—A number of old orchards, which were planted out before apple growing became "a regular business" in Pajaro valley, have been cleaned up this fall by the removal of the useless trees. There are yet orchards where a like improvement would prove a good thing. Most of these old-

time orchards had a score or more of varieties of trees, and but few of them have been of any commercial value. Most of them have been inviting resorts for pests. The apple tree which is not profitable or which is of a variety that produces unsalable fruit is taking up ground which can be turned to better use. There should be no drone trees in a commercial apple orchard.

### SOLANO.

**UNWILLING TO GRANT RIGHT OF WAY ON TERMS PROPOSED.**—Dixon Tribune, Dec. 7: The farmers in this section have not been willing to grant right of ways through their lands on the proposition that the Bay Counties Power Co. has been offering for the privilege. A number of the landowners affected by the company's proposed lines held a meeting in Dixon last week, and agreed to allow the company to construct their lines across the lands, the company to pay the assessed valuation of the land for the privilege. If the company accepts the offer, they will be expected to maintain locked gates at all points of entrance to the different fields, the farmer to be allowed the right to use the land traversed by the lines for productive purposes. The farmers' proposition seems to be exceedingly reasonable.

### SONOMA.

**BLACKBERRY CONTRACT.**—Sebastopol Times, Dec. 5: A short time ago Frank Rego planted out ten acres of blackberries on his farm west of town and the vines are in a flourishing condition. Last Sunday, while in Santa Rosa, Mr. Rego contracted with the California Cannery Association for the sale of the entire blackberry crop for a term of ten years.

**NEW VARIETY OF CORN.**—Tribune, Dec. 6: In the display of products made at the late Farmers' Institute, J. F. Nichols exhibited a new kind of corn called "King Phillip." The ears are very long, contain ten rows of grains, of a dark, reddish-brown color, very handsome. The grains are flinty in character, and are said to make excellent cornmeal. Mr. Nichols states that stock will eat this corn as fodder from the tassel to the roots.

**SOME POTATOES.**—Petaluma Argus, Dec. 5: Frank Purvine was in town Saturday with four sample potatoes raised on his ranch this year. One spud weighs nearly four pounds. In an air line, as the crow flies, the potato is an even foot in length. Mr. Purvine claims to have a thousand sacks of such potatoes.

### STANISLAUS.

**STORING SWEET POTATOES.**—Modesto Herald, Dec. 6: C. N. Whitmore recently excavated a cellar 16x40 feet and 7 feet in depth, at Ceres, to store sweet potatoes, and the cellar is two-thirds full of the sweets, carefully stacked one upon another. The potatoes will be withdrawn as the market demands. It has so far been impossible to demand individual statements of yield and expenses, but the yield is estimated by Mr. Whitmore at an average of 100 sacks to the acre, averaging about 106 pounds to the sack. They have been selling at 60 to 90 cents per sack. Prices are expected to advance later on, as the market is cleared of the supply direct from the fields. Several growers in the Ceres quarter have smaller cellars, with the balance of their crops similarly stored.

**AN OLIVE CROP.**—Modesto Herald, Nov. 29: Geo. Moyer, lessee of the J. R. Coldwell ranch in the suburbs of Modesto, has just sold six tons of olives from the 10-acre orchard on the place, A. V. Stuart, of near Oakdale, the buyer. Mr. Stuart makes oil from them. About a ton of olives remain on hand, Moyer says. The olives are of three varieties—Mission, Nevadillo and Picholine, the latter a small and properly a pickling olive and the other two varieties larger and more valuable for oil. There are five acres of the Picholines and five acres of the other two varieties. The Missions and Nevadillos yielded about a ton to the acre and brought \$40 per ton delivered, the Picholines half a ton to the acre and bringing \$30 per ton delivered. The olives cost \$15 per ton to pick, under contract with Japanese, and \$2 per ton to deliver, so that \$23 per ton net was realized from the large varieties and \$13 per ton from the Picholines. The Picholine trees are ten and the others eight years old, grown without irrigation. With irrigation the olives would be twice as large, the trees double their present size and the yield much heavier, independent of the size of the product. In other words, with irrigation, an olive orchard would be a good business proposition. Mr. Geer, who has an olive orchard in the same quarter, largely if not wholly Missions, is pickling his product and will derive a greater revenue.

### TEHAMA.

**BIG STOCK RANCH CHANGES HANDS.**—Red Bluff Sentinel: Mr. and Mrs. Jo-

seph Beck have purchased from G. W. Vestal the remaining half interest in their big stock ranch 23 miles west of Red Bluff, comprising between 5000 and 6000 acres of fine grazing land. The price paid was the same as they paid Mr. Vestal for the first half, about \$8000. This is one of the best stock ranges in the State. Its enterprising owners expect to stock it with sheep and cattle. It is sufficient for 4000 sheep and 400 cattle.

**A CURLY-HAIRED HORSE.**—Red Bluff News: A small saddle horse seen about town lately has been attracting more or less attention on account of his very curly hair, which, it is reported, turned from straight to kinky or curly in one night. A gentleman who has known this horse for years says that while in the mountains the horse was one day worked very hard and was put in a stable before he had properly cooled off, and next morning it was found that the hair which the day before was perfectly straight had become curled and kinky.

**FRUIT CANNERY TO BE REOPENED.**—Red Bluff People's Cause, Dec. 8: James Feely, the well-known fruit buyer and cannery man, and George H. Kraft have made arrangements to reopen and run the Red Bluff cannery next season. It is understood options on enough fruit have been secured to justify the enlargement of the plant. New machinery of late improvements will be put in and the building will be overhauled and fitted up ready for the season's work.

### TULARE.

**PLANO CITRUS LANDS.**—Porterville Enterprise, Dec. 7: Fifty acres of Plano land have already been sold which will positively be set out to oranges this coming planting season, and requests for information regarding this new district are constantly being made. The price paid was \$25 per acre and the land was purchased from J. Scott & Son. It adjoins the Ting property. Mr. Ting has about fourteen acres planted to oranges and lemons, and this year his orange crop, consisting of five acres of five-year-old trees, sold on the trees for \$1000 cash. Dr. W. S. Giberson of San Francisco will likely buy eighty acres situated opposite the George Russell place, which he will plant to oranges. The old Mitchell place, consisting of 200 acres, is reported sold to parties who will most likely develop water and plant citrus trees.

**DAIRY BUSINESS BROUGHT HIM THROUGH.**—Tulare Register: Up toward the north end of this valley there lives a man whose experiences of the past few years ought to be published far and wide as an inspiration to the faint-hearted. A few years ago he, with others, undertook an irrigation enterprise and were swamped by it. They had been well off, but their lands were sold under the hammer and they were bankrupted. One of the men was so crushed by the loss of his property that he gave way under the strain and died. The other was made of more courageous timber, and, although sixty years old, took hold of life anew without losing hope. He went to the bank that had taken his land on foreclosure of mortgage and asked that his home place be deeded back to him, a trust deed being taken as security. It was done. He had ninety acres of alfalfa and the credit of having friends who believed in him. By using this credit, he was able to get forty cows, and with these he started a small dairy. He stuck to his dairy, and the first year paid for his cows and extended his credit far enough to buy forty more. With these he paid for his land and extended his dairy business until, during the year 1899, he cleared \$13,000 and is now on the high road to a recovery of his fortune.

### YUBA.

**WOOLEN MILL CONTEMPLATED.**—Marysville Democrat, Dec. 7: Certain citizens of Oregon, assisted by John Q. Packard, John Martin and N. D. Rideout are reported willing to construct a woolen mill in Marysville, provided \$15,000 of the necessary money is raised here. Over \$8000 of the woolen mill stock has been taken, and it is believed no trouble will be experienced in obtaining the full \$15,000.

## Horse Owners! Use

GOMBAULT'S

## Caustic Balsam



A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.



## THE HOME CIRCLE.

## A Man's Housekeeping.

He talked each time you met him  
Of the duties of a wife;  
He said the perfect woman  
In her home would find her life.  
He always called it pleasure,—  
Said the day's toil didn't hurt  
If 'twas done in joy and lightness;  
—But he never ironed a shirt.

How he sneered at every pastime!  
How he blackmailed woman's club!  
As he gossiped of the members,  
Told such tales—(Ah, there's the rub!  
That each man straightway repeated!)  
While he lingered at the door,  
To remark on housework's pleasures,  
—Though he never scrubbed a floor.

He would often sit and murmur,  
In a dull, unending stream,  
"Woman's place is at the fireside,"  
Till the words became a dream,  
When he sat at home a-dozing,  
Or the daily papers read,  
While his tired wife was sighing,  
—Yet he never made a bed.

How it came to pass he knew not;  
But in dreams, one night, he heard  
Orders come to try the pleasures  
Told by him in every word.  
He must rise in cold and darkness,  
He must make the kitchen fire;  
Cook the breakfast, set the table,  
Never think that he could tire.

He it was who dressed the children,  
Smoothed each frowning little face;  
Cleared the table, washed the dishes,  
Did it with but sorry grace.  
He it was who aired the clothing,  
Made the beds in every room;  
Picked up papers, swept the carpets,  
Broke his back to wield the broom.

Flapping cobwebs, dusting sofas,  
Cleaning windows, washing clothes,  
Rounding o'er the ironing table,  
—Cursed each morning as he rose!—  
Made the dresses, darned and mended,  
Scrubbed the floors, the tables, chairs,  
Cooked and cooked, till scarcely able,  
Late at night, to creep up stairs.

Oh, the joy of his awaking,  
Oh, the horror of that dream;  
There was something gained in knowing  
Things are often what they seem.  
With what love he eyed the housewife,  
As remembrance in him stirred.  
But again of housework's pleasure  
No one ever—ever heard.

## Their Hundred Dollar Bill.

"So he's gone at last, has he?"  
said my wife, with a little elevation of  
her pretty eyebrows. "I began to  
think that he was gifted with immor-  
tality."

"Dead at last," said I. "And what  
do you think, Jenny? He has left us  
a hundred dollars."

"A hundred dollars!" echoed my  
wife, clasping her hands together.  
"O, Charley—a hundred dollars!"

Now all this may sound like a two-  
pence-half-penny sort of affair to my  
readers, as I am very well aware.  
But as I am only a clerk on a salary of  
nine hundred dollars a year—a hundred  
dollars drifting, as it were, out of the  
sky, seemed a very neat little sum to  
me.

Jenny and I were both young peo-  
ple, just beginning the world, with no  
particular riches, except one apple-  
cheeked baby. I walked to and from  
business every day to save twenty cents  
fares. We did our best to make both  
ends meet—and a tight pull we found  
it.

Old Uncle Moses Manson was mor-  
tally offended when his niece, Jenny  
Clifford, chose to marry me instead  
of a weazened, bespectacled old con-  
temporary of his own. He had never  
spoken to her since, and we naturally  
entertained no very exalted hopes of  
any testamentary recollections on his  
part. And the hundred dollar bill,  
therefore, possessed the charm of an  
agreeable surprise into the bargain.

"Charley," said Jenny, under her  
breath, "what shall we do with it?"

"That is the very question," said  
I. "Do you know, Jenny—"

I hesitated a little here.

"Yes?" she responded, interroga-  
tively.

"Every fellow in the bank, except

me, has a gold watch. I've been  
ashamed of this silver concern more  
than once. And Seymour has a very  
nice second-hand one for sale that he  
will let me have for ninety dollars if  
—"

"And turn the hundred dollars into  
a mere useless ornament!" cried  
Jenny, with a strong accent of dis-  
approbation in her voice. "Charley,  
that isn't a bit like you."

"Well, then, what do you suggest?"

"I should so like to give a social  
party with it," said Jenny, coaxingly.  
"Only think how often we've been  
invited out since we were married,  
and never have had a chance to return  
any of the hospitalities of our friends.  
The musicians, the supper and all,  
would come within the hundred dol-  
lars."

"And you are absurd enough  
to wish to eat, and drink, and  
dance up a sum like that!" I cried.

"No, no, Jennette, it is entirely out  
of the question."

"A new velvet suit for the baby?"  
suggested Jenny, pouting a little at  
the emphasis of my words.

"How would it correspond with the  
rest of our surroundings?" I asked,  
not without an accent of bitterness.

"You had a great deal better suggest  
a new suit and overcoat for me. You  
never seem to observe how shabby  
I am getting."

"Nobody notices a gentleman's  
dress," said Jenny. "I can make  
your overcoat look very nice with fresh  
binding and new buttons—but how I  
should like a sealskin jacket!"

"Jenny," said I, somewhat dis-  
gusted, "I had no idea you could be  
so selfish."

"Selfish, indeed!" cried she. "I  
would like to know whether you have  
yet suggested anything which was not  
for your own special benefit and use!"

We were both silent. I don't sup-  
pose either one of us had felt so vin-  
dictive before, since our marriage.  
Clearly the hundred dollar bill had  
worked no great benefit as yet.

"I'll tell you what, Jenny," said I;  
"let's compromise. Let's buy a new  
sitting room and stairs carpet. I saw  
a beautiful pattern yesterday."

"I don't care very much for new  
carpets as long as we live in the second  
floor," said Jenny. "And you don't  
seem to remember, Charles, that I  
haven't had a silk dress since we were  
married. Black silk is suitable for all  
occasions, from a wedding to a funeral,  
and I really think—"

"I believe a woman's thoughts are  
always running on dress," muttered  
I, somewhat contemptuously. "I'm  
sure that black alpaca of yours is  
beautiful."

"That's all you know about the  
matter," said Jenny, elevating her  
nose. "Well, I don't care. Spend  
the money as you choose. Only, Uncle  
Moses was my relative."

"And the money was left to me,  
Mrs. Everts," said I.

"O, Charles," said she, "how can  
you speak to me so?"

"Because I'm a brute, Jenny," said  
I, fairly melted. "Forgive me, and  
we'll fling the hundred dollar bill into  
the fire before we'll let it scatter the  
seeds of division between us."

"No, Charley, don't do that," said  
Jenny, laughing through her tears.  
"Let's—put it in the savings bank."

"Agreed," said I. "And apropos  
of savings banks, did I tell you about  
Green?"

"No. What about Green?"

"Why, he and his wife have just  
moved into the prettiest little gothic  
cottage you ever saw, just the other  
side of the Harlem bridge, with a lawn  
and garden, and space to keep a little  
Alderney cow."

"Rented it?"

"No; bought it."

"Why, Charles, how can that be?  
Greene has only two or three hundred  
a year more than you, and it takes  
money to buy a place in the country."

"All savings banks, my dear," said  
I. "Green tells me that he and his  
wife have been saving up for years,  
with special reference to this country  
home for their children. They com-  
menced with a fifty cent piece."

"We can do better than that!"

said Jenny, with sparkling eyes. "And  
I'll do without the silk dress."

"And I'll make the old overcoat  
last another season, at the very least,"  
I added.

The next morning, bright and early,  
as soon as business would permit, I  
went and deposited the hundred dol-  
lars in the nearest savings bank.

A week afterward Mr. Manyly  
dropped in, in a friendly way. Mr.  
Manyly is the lawyer who transacted  
Uncle Moses Manson's financial affairs  
—a plump, bald-headed, deep-voiced  
old gentleman, who always dresses in  
spotless black and wears a big seal  
ring on the little finger of his left hand.

"So," said Mr. Manyly, "you've in-  
vested that hundred dollars, have  
you?"

"Yes," said I, with the complacent  
air of one who has an account in the  
bank. "But how did you know it?"

"O, I know a good many things,"  
said Mr. Manyly, oracularly. "But  
what's the idea of it?"

"Economy," struck in Jenny,  
proudly. "We are saving now, Mr.  
Manyly. We mean to have a home  
for our little Charley—a garden full  
of roses and pinks and strawberries  
one of these days."

"And a very laudable ambition," said  
Mr. Manyly in that smooth, oily way  
of his. "How much would such a  
place cost now?"

"Charley thinks if we waited for a  
bargain we could secure it for about  
seven thousand dollars," Jenny an-  
swered promptly.

"Buy it now, then," said Mr. Many-  
ly. "Here's a check for eight thou-  
sand."

"Eh," cried I, breathlessly.

"A check," the old lawyer went on,  
"signed by your Uncle Manson, pay-  
able to the order of his niece, Jane  
Annie Everts. Ah! you may well look  
astonished. He was an eccentric old  
chap, this uncle of yours, Mrs.  
Everts—and I have his written in-  
structions to keep an eye on the man-  
ner in which you invested that hundred  
dollar bequest of his. 'If it is squan-  
dered in any foolish way,' he writes,  
'there is an end of the matter. Put my  
money all in the hospital for hunch-  
backs. If they show any disposition  
to save, help them along with this  
check for eight thousand dollars, to be  
expended only in the purchase of real  
estate.' I congratulate you."

This is how we became possessed of  
our little country home, where Charley  
thrives like a growing flower and Jenny  
flits about in a broad-brimmed garden-  
ing hat, trimming roses, pruning  
gooseberries and planting lily bulbs.  
And the hundred dollar bill still lies  
untouched in the savings bank.

"It shall be Charley's fortune,"  
says my wife. "It would be a shame  
to touch it after it has brought us so  
much good."—Philadelphia Item.

## Grievance of an Authoress.

The lady story writer towered in the  
doorway.

"Perhaps you take me for a writer  
of patent medicine advertising," she  
sarcastically remarked to the startled  
editor.

"I think not, madam," he managed  
to reply. "What seems to be the dif-  
ficulty?"

"Then you have not noticed it?" she  
cried.

He shook his uncombed locks.

"Listen," she said, as she flung a  
glance of disdain at him. "The atrocity  
occurs in the chapter of my story  
where the American heiress discovers  
the perfidy of her spendthrift French  
husband. This is the particular sen-  
tence: 'She paled with indignation,  
and, stooping suddenly, took a bill from  
the oblong box before her.'"

"Yes," said the editor. "Was there  
an error in the printed copy?"

"Error!" shrieked the authoress;  
"there were two of them! They were  
worse than errors—they are crimes!  
Listen! For 'indignation' you substi-  
tuted 'indigestion,' and in place of 'bill'  
you printed 'pill'!"

And she gurgled in her throat as she  
swept from the room.—Cleveland Plain  
Dealer.

## Saved by an Eagle.

In the story of "Waukewa's Eagle,"  
in the December St. Nicholas, James  
Buckham preserves the legend of an  
Indian lad who saved a wounded eaglet,  
and nursed it back to strength, and  
found, a year later, that in doing so he  
had cast his bread upon the waters.

The rifles were full of salmon, big,  
lusty fellows, who glided about his  
canoe on every side in an endless silver  
stream. Waukewa plunged his spear  
right and left, and tossed one glitter-  
ing victim after another into the bark  
canoe. So absorbed in the sport was  
he that for once he did not notice when  
the head of the rapids was reached and  
the canoe began to glide more swiftly  
among the rocks. But suddenly he  
looked up, caught his paddle and dipped  
it wildly in the swirling water. The  
canoe swung sidewise, shivered, held its  
own against the torrent, and then  
slowly, inch by inch, began to creep up-  
stream toward the shore. But suddenly  
there was a loud, cruel snap, and the  
paddle parted in the boy's hands,  
broken just above the blade! Waukewa  
gave a cry of despairing agony. Then  
he bent to the gunwale of his canoe and  
with the shattered blade fought des-  
perately against the current. But it  
was useless. The racing torrent swept  
him downward; the hungry falls roared  
tauntingly in his ears.

Then the Indian boy knelt calmly up-  
right in the canoe, facing the mist of the  
falls, and folded his arms. His young  
face was stern and lofty. He had lived  
like a brave hitherto—now he would die  
like one.

Faster and faster sped the doomed  
canoe toward the great cataract. The  
black rocks glided away on either side  
like phantoms. The roar of the terrible  
waters became like thunder in the boy's  
ears. But still he gazed calmly and  
sternly ahead, facing his fate as a brave  
Indian should. At last he began to  
chant the death song, which he had  
learned from the older braves. In a  
few moments all would be over. But  
he would come before the Great Spirit  
with a fearless hymn upon his lips.

Suddenly a shadow fell across the  
canoe. Waukewa lifted his eyes and  
saw a great eagle hovering over, with  
dangling legs, and a spread of wings  
that blotted out the sun. Once more  
the eyes of the Indian boy and the eagle  
met; and now it was the eagle who was  
master!

With a glad cry the Indian boy stood  
up in his canoe, and the eagle hovered  
lower. Now the canoe tossed up on  
that great swelling wave that climbs to  
the cataract's edge, and the boy lifted  
his hands and caught the legs of the  
eagle. The next moment he looked  
down into the awful gulf of waters from  
its very verge. The canoe was snatched  
from beneath him and plunged down the  
black wall of the cataract; but he and  
the struggling eagle were floating out-  
ward and downward through the cloud  
of mist. The cataract roared terribly,  
like a wild beast robbed of its prey.  
The spray beat and blinded, the air  
rushed upward as the fell. But the  
eagle struggled on with his burden. He  
fought his way out of the mist and the  
flying spray. His great wings threshed  
the air with a whistling sound. Down,  
down they sank, the boy and the eagle,  
but ever farther from the precipice of  
water and the boiling whirlpool below.  
At length, with a fluttering plunge, the  
eagle dropped on a sand-bar below the  
whirlpool, and he and the Indian boy  
lay there a minute, breathless and ex-  
hausted. Then the eagle slowly lifted  
himself, took the air under his free  
wings, and soared away, while the  
Indian boy knelt on the sand, with shin-  
ing eyes following the great bird till he  
faded into the gray of the cliffs.

In a cemetery near Portland, Maine,  
there are five tablets all alike except  
the inscriptions which read:  
"Anna, the first wife of John  
Brown."  
"Mary, the second wife of John  
Brown."  
"Jane, the third wife of John  
Brown."  
"Clara, the fourth wife of John  
Brown."  
"John Brown. At rest at last."



## His Last Bet.

"I'll never wager another cent on election as long as I live," groaned Smith. "Jones was calling at my home a short time ago, and as we differ in politics, it wasn't long before we were having it hot and strong. Well, he was so sure that his man was going to be elected that I asked him what he wanted to wager on the result.

"Fifty dollars," said he, promptly. "Now, I wasn't going to be bluffed in the presence of my wife; besides it was just like picking up the money, as I thought; so I said I would go him, and suggested that Mrs. Smith should act as stakeholder. Jones is a first-rate fellow and all that, but is as liable to be forgetful when he makes a wager, and I thought it just as well to have the money up. He came to time and I shook hands with myself—because he was so easy. When he left, my wife, who had been all smiles before, turned upon me angrily and demanded what I meant by not only betting in her presence, but causing her to act as stakeholder as well.

"My dear," said I hastily, "it is simply picking up money, and I might as well find it as some one else; besides," I added diplomatically, "I intend that you shall have it to do with it as you like."

"That seemed to satisfy her, and I awaited the election with all the confidence in the world. I couldn't believe my senses on the morning after when I saw that my man was defeated.

"Give Jones his money," said I to Mrs. Smith with a groan when I saw that there was no hope.

"What?" she screamed.

"I lost," said I, with a sickly smile.

"You told me you couldn't lose!" she almost shouted.

"And so I thought," I answered. "I suppose Jones will be around for his money some time to-day."

"I haven't got it!" she sobbed.

"What!" It was my turn to shout now.

"I—I s—s—spent it! Y—y—you s—s—said t—that y—y—you c—c—couldn't l—lose and I t—t—took y—y—you at y—your w—w—word!"

"There was nothing for me to do but see that Jones got his money. I've got through now. I wouldn't bet 10 cents that the sun rises to-morrow morning."

—Detroit Free Press.

## Something About Giants.

Old chroniclers tell wonderful stories of the giants that used to walk the earth, even as we read in the bible of Goliath, who was slain by the youth David. In later days perhaps the most interesting books on giants was written by a French scholar named Henrion in 1718. This book asserted that Adam, the first man, was 123 feet 9 inches tall, and that Eve was only 5 feet shorter. After Adam man began to lose height rapidly. Noah, says M. Henrion, was about 27 feet tall, and Abraham measured not more than 20. Moses reached only the poor height of 13 feet, and finally man had to be contented with feeble little frames from 4 to 6 feet in height.

Many huge human skeletons have been found, according to report. It is said that the skull of Chevalier Rincon, whose remains were discovered in 1509 at Rouen, held a bushel of wheat. The shinbone was 4 feet long, and others in proportion. Many other similar skeletons were found, one in Sicily that measured 300 feet in length. In the present century, however, it has been shown that these skeletons were not of humans, but of prehistoric beasts.

It is an interesting fact that giants as a rule are both weak of body and of mind, while dwarfs are usually keenly witted and healthy. A story is told that the empress of Austria in the seventeenth century had all the giants and dwarfs of the Germanic empire assembled at Vienna. They were quartered together, and fear was expressed that the giants would terrify the dwarfs. The contrary proved to be the case. The dwarfs tormented and robbed the giants to the extent that, with tears in their eyes the

giants begged to be protected from them.

The usual circus and museum giants of to-day are rarely over 7 feet in height, but they wear high-heeled boots and high hats that add a foot or more in height to their appearance.

## "Sandwich Men."

The "sandwich men" are among the "East London Types" described by Sir Walter Besant in the December Century.

They walk between the boards all day long for a shilling. It is work which makes no demand upon them. They slowly and mechanically plod along, each following the man before him. If you watch the sandwich man you may observe that he looks neither to the right nor to the left. His face expresses no emotion of any kind; he feels no interest at anything. He is like the hermit, or the recluse, or the anchorite—inclusus. He is dead to the world: a man without friends, without money, without hope, without resources, without the power of work, without strength of mind to resolve, without will to urge him and to sustain him or to lead him out, has no further concern with the world. It is a moving panorama, a series of pictures on which he looks without interest; his own figure, which ought to be there, is not there. Newsboys shout their evening papers; the shops light up their wares till the whole street is a fairyland of treasures; the well-dressed people pass him in long procession; the carriages go up and down the road. To all the life around him, to all the sights around him, to the meaning of the show, and to the dance of life and death that fills the street, the sandwich man is indifferent. He has no ambition; he has no future to hope for, no past that he cares to remember; he lives only for the day.

## Made the Prayer of His Life.

An old man in Georgia, named Jack Baldwin, having lost his hat in an old dry well one day hitched a rope to a snag and let himself down. A wicked wag named Neal came along just then, and quietly detaching a bell from Baldwin's old blind horse, approached the well, bell in hand, and began a ting-a-ling. Jack thought the horse was coming, and said "Hang the old blind horse; he's coming this way sure, and he ain't got no more sense than to fall in on me—whoa, Ball!"

The sound came closer. "Great Jerusalem! The old blind fool will be right on top of me in a minit—whoa, Ball! Whoa, Ball!"

Ned kicked a little dirt on Jack's head, and Jack began to pray:

"Oh, Lord, have mercy on—whoa, Ball!—a poor sinner; I'm gone now—whoa, Ball! Our Father, who art in—whoa Ball!—hallowed be thy—gee, Ball! gee; what'll I do?—name. Now I lay me down to sl—gee, Ball! (Just then in fell more dirt.) Oh, Lord, if you ever intend to do anything for me—back, Ball! whoa!—thy kingdom come—gee, Ball! Oh, Lord, you know I was baptized in Smith's mill-dam—whoa, Ball! Oh, up! Murder! Whoa?"

Neal could hold in no longer, and shouted a laugh which might have been heard two miles, which was about as far as Jack chased him when he got out.—Spectator.

## The Sexton's Wit.

"An Irishman of the full blood cannot resist any opportunity for repartee, no matter how solemn the occasion or what his surroundings," said an English clergyman, a visitor in Washington recently, when the conversation turned on the funny experiences of clergymen connected with the church.

"I was assisting an old friend of mine, the rector of a church in Ireland, one Sunday, and before the service we were in the vestry room putting on our robes, with the old sexton, a shriveled-up Irishman of the perfect type, assisting. My friend, who was

somewhat old, was a little testy that morning, and somehow the sleeve of his surplice got mixed up. Notwithstanding the assiduous efforts of the old sexton to direct his arm to the right hole the two would not connect. Finally, losing patience, my friend said, sharply, 'Ach, the devil's in the thing?'

"The old sexton brightened up, and looking over at me with a twinkle in his eye, said, as quick as lightning, 'Not yit, your riverince.'

"It restored the good humor of the situation, and the vestment was properly adjusted."—Washington Post.

## DOMESTIC ECONOMY.

## Domestic Hints.

**HALIBUT SALAD.**—Dip the evenly cut end of hard-boiled eggs cut in halves into a teaspoonful of gelatine softened in cold water and dissolved over hot water, and press them in crown shape on to a chilled serving dish; fasten diamond shape pieces of pickled beet, with gelatine, to the front and top of each egg half; spread the edge of a thick slice of cooked and marinated halibut from which the skin has been taken, with jelly, mayonnaise or green butter, and decorate with figures cut from the trimmings of the eggs; press a border of jelly mayonnaise or green butter around the top of the fish. Place the fish in the center of the crown of eggs, with a pint of cooked peas dressed with French dressing around it; cover the place from which the bone was taken with heart leaves of lettuce and two fine olives. Serve with mayonnaise dressing.

**CORN PUDDING.**—It requires two dozen ears of corn, well filled out but young. Grate or cut from the cob and pound the kernels, or a part may be pounded and a part grated. Add three or four crackers, pounded, one quart of milk, five eggs, four table-spoonfuls of sugar and a little salt. Bake one hour in a moderate oven. This is to be served as a vegetable course, and to be eaten with butter. It is not easy to give a sure rule for corn pudding, because much depends on the condition of the corn. If it is young and very milky not so much milk is required; old corn needs fewer eggs and perhaps no cracker. Eggs and cracker are added to stiffen, milk to soften. Old corn makes a stiff pudding, young corn a softer one. Judgment and experience will therefore best regulate the amount of milk, eggs and cracker. After the season of fresh corn is passed canned corn may be used; if choice warranted hands are selected the result will be as satisfactory as though fresh corn were used.

**UNWASHED FRUIT.**—The recent epidemic of typhoid fever in an orphan asylum was traced to germs brought in on apples. This should warn housekeepers, if further emphasis is needed, of the risk in serving unwashed fruit. At every corner grocery the tempting fruits now so abundant are displayed uncovered, offering the best sort of catch-alls for the germs of the street and air. In addition they are handled by none to clean fingers, carried through the streets in unprotected baskets, and too often transferred directly too ice-boxes, in which they may stand, perhaps, next to open vessels holding those excellent absorbents, milk and butter. The average cook resents any reflection on her care of the food that is to be served uncooked. The vigilance and patience of the mistress, however, that will be needed to enforce her regulations in this regard, are a small price to pay for the additional security to the health of her family.

**BOILING EGGS.**—No housekeeping tradition dies so hard in the face of scientific cooking-school enlightenment as that which relates to the boiling of eggs. A soft-boiled egg, according to nine cooks out of ten, is put on in boiling water and allowed to remain from two to two and a half min-

utes. Eggs intended to be hard boiled also go in boiling water, and stay from ten to fifteen minutes. The new reading has changed all this. The modern cooking teacher says that when the water is allowed to boil the egg is tough, horny and indigestible. To cook eggs soft, she further explains, they must be put in cold water, which is brought to a temperature of 175° F., and allowed to stand in this water from six to eight minutes. For hard boiled eggs, put in cold water, bring to 175° F., then set back from the fire and keep hot forty-five minutes. Cooked in this way the albumen is reduced to a jelly-like substance, easily digested, and the yolks are dry and mealy.

## Helpful Suggestions.

Should the top of a glass jar refuse to come off, turn the jar upside down in a pan containing a little hot water, and allow it to remain a minute or two. It may usually be unscrewed with little effort when taken out.

If you wish to prepare a new iron kettle for use, fill it with potato peelings and boil them an hour or two, then wash the kettle and rub it with lard. This will prevent rust, and the food cooked in it will not have the bad tastes that a new kettle is apt to give it.

When the hinges of a door creak apply a few drops of oil from the machine oil can, and swing the door back and forth to allow it to work down to all parts of the hinges. Soap may be used for the same purpose, and either one will stop the disagreeable noise.

Broken china may be mended by brushing the edges with white lead such as painters use. Press the pieces together and tie them in place, then leave them two or three days until thoroughly dry. The dish can be broken as easily anywhere else as at the old break, and water does not affect it.

Brushes and sponges that have been used in the bathroom and kitchen require frequent cleaning to prevent them from having a musty, disagreeable smell. Wash them in a strong soapsuds, rinse in clear water and put them up to dry. A rack made of wire, which allows the air to circulate freely through it, should be used to keep sponges in after they have been used, and they will dry quickly.

## BABY FOODS

It is clear that doctors and mothers think more of special foods than they used to.

The reasons are: (1) both mothers and babies live less naturally than they used to; (2) mother's milk is not so plenty, and not so good, as it used to be; (3) Scott's emulsion of cod-liver oil is mother food as well as baby food—enables the mother to feed her baby naturally.

We'll send you a little to try if you like. SCOTT & BOWNE, 409 Pearl street, New York.

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## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Dec. 12, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

|                | Jan.    | May.    |
|----------------|---------|---------|
| Wednesday..... | 72½@71½ | 75½@74½ |
| Thursday.....  | 71¼@70¾ | 74¼@73¾ |
| Friday.....    | 70¾@71¼ | 74 @73¾ |
| Saturday.....  | 71½@70¾ | 73¾@73¾ |
| Monday.....    | 70¾@71¼ | 73¾@72¾ |
| Tuesday.....   | 70¾@70¾ | 73 @73¾ |

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

|                | Dec.    | Mar.   |
|----------------|---------|--------|
| Wednesday..... | 5s 11¼d | 6s 0¼d |
| Thursday.....  | 5s 11¼d | 6s 0¼d |
| Friday.....    | 5s 11¼d | 6s 0¼d |
| Saturday.....  | 5s 11¼d | 6s 0¼d |
| Monday.....    | 5s 11¼d | 6s 0¼d |
| Tuesday.....   | 5s 11¼d | 6s 0¼d |

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

|                | May, 1901.  | Dec., 1901. |
|----------------|-------------|-------------|
| Thursday.....  | 1 04¼@1 04½ | 1 09¼@1 09½ |
| Friday.....    | 1 04¼@1 05  | 1 09¼@1 09½ |
| Saturday.....  | 1 04¼@1 04½ | —@—         |
| Monday.....    | 1 04¼@1 03½ | 1 09¼@1 08¾ |
| Tuesday.....   | 1 03½@1 03½ | 1 08¾@1 08¾ |
| Wednesday..... | 1 03½@1 04½ | 1 09 @1 09½ |

## WHEAT.

The wheat market has not fluctuated to any great extent since last review, having been quiet most of the time, with values fairly steady. There was no active inquiry, either for shipment or on local milling account. Although the fleet of vessels now in port, engaged for wheat loading, is larger than at any previous date the current season, exporters do not appear for the time being to be especially in need of wheat, but it is altogether probable they will require considerably more than they are now carrying before the vessels now in port and listed for wheat are all provided for. Five ships were cleared for Europe with wheat cargoes the past week, and there are about thirty vessels in port engaged for wheat, those representing a carrying capacity of fully 90,000 tons. Stocks of wheat in the State on the 1st inst., according to the statement of the Produce Exchange, were 620,000 tons, against about 800,000 tons a year ago, 325,000 tons two years ago, and 457,000 tons on Dec. 1st, 1897. There are ships here and now headed this way sufficient to carry about 275,000 tons. Vessels for about 100,000 tons more will be necessary to effect anything like a fair clean-up before the close of the season. The United States visible supply east of the Rockies was reported at 61,494,000 bushels, showing a decrease of 685,000 bushels for the week, while for corresponding week last year there was an increase of 519,000 bushels.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

|                                                                                                                  |               |
|------------------------------------------------------------------------------------------------------------------|---------------|
| May, 1901, delivery, \$1.03½@1.04½.                                                                              |               |
| December, 1901, delivery, \$1.08½@1.09½.                                                                         |               |
| Wednesday, at regular noon session of Call Board, May, 1901, wheat sold at —@—c.; December, 1901, \$1.03½@1.04½. |               |
| California Milling.....                                                                                          | \$1 02½@1 07½ |
| Cal. No. 1 shipping, alongside.....                                                                              | 97½@1 00      |
| Oregon Valley.....                                                                                               | 97½@1 00      |
| Washington Blue Stem.....                                                                                        | 1 00 @1 05    |
| Washington Club.....                                                                                             | 97½@1 02½     |
| Of qualities wheat.....                                                                                          | 92½@ 95       |

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

|                      | 1899-1900.    | 1900-01.      |
|----------------------|---------------|---------------|
| Liv. quotations..... | 6s2d@6s2½d    | 6s2d@6s2½d    |
| Freight rates.....   | 35@36½s       | 40@—s         |
| Local market.....    | \$0 97¼@1 01¼ | \$0 98¼@1 01¼ |

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## STOCKS OF GRAIN IN STATE DEC. 1.

The San Francisco Produce Exchange gives the following totals of the stocks of grain and flour remaining in the State on Dec. 1st for the four years named:

|                       | 1900.      | 1899.      | 1898.     | 1897.     |
|-----------------------|------------|------------|-----------|-----------|
| Flour, bbls. . . . .  | 144,108    | 112,136    | 122,833   | 115,992   |
| Wheat, ctls. . . . .  | 12,401,980 | 15,998,280 | 6,494,800 | 9,132,020 |
| Barley, ctls. . . . . | 3,893,840  | 4,788,280  | 1,264,200 | 3,136,020 |
| Oats, ctls. . . . .   | 200,280    | 235,700    | 188,000   | 106,160   |
| Rye, ctls. . . . .    | 151,040    | 54,140     | 33,440    | 35,240    |

## FLOUR.

Market presents an easy tone, with no changes to note in quotable rates. Spot supplies are fairly liberal, as compared with the immediate demand. There are moderate quantities going outward, largely on contracts. Business on local account is of light volume.

|                                |             |
|--------------------------------|-------------|
| Superfine, lower grades.....   | \$2 25@2 40 |
| Superfine, good to choice..... | 2 50@2 75   |
| Country grades, extras.....    | 3 00@3 25   |
| Choice and extra choice.....   | 3 25@3 50   |
| Fancy brands, jobbing.....     | 3 50@3 65   |
| Oregon, Bakers' extra.....     | 2 75@3 15   |
| Washington, Bakers' extra..... | 2 75@3 25   |

## BARLEY.

Values have been fairly well maintained at the range quoted, more in consequence of absence of any noteworthy selling pressure than of active inquiry from buyers. While stocks in the State, as reported by the Produce Exchange, are less than a year ago, they are tolerably heavy as compared with previous years. Present supplies are reported at 195,000 tons, as against 239,000 tons a year ago, but in the two years immediately preceding they were 63,000 tons and 157,000 tons, respectively. If there is no large invisible supply, and the amount consumed during the next six months is up to the average, there will be no great quantity carried over from current season.

|                                 |           |
|---------------------------------|-----------|
| Feed, No. 1 to choice.....      | 75 @ 77½  |
| Feed, fair to good.....         | 70 @ 72½  |
| Brewing, No. 1 to choice.....   | 80 @ 85   |
| Chevalier, No. 1 to choice..... | 97½@1 02½ |
| Chevalier, No. 2.....           | 85 @ 90   |
| Chevalier, poor.....            | 70 @ 75   |

## OATS.

Market is moderately firm at ruling rates, but there is not much doing, which is to be expected under existing conditions, as prices are on a rather high plane, as compared with values current on other cereals, for buyers to take hold freely. There is no disposition shown, however, to grant material concessions to effect an increase of transfers.

|                               |             |
|-------------------------------|-------------|
| White Oats, fancy feed.....   | 1 37½@1 42½ |
| White, good to choice.....    | 1 30 @1 35  |
| White, poor to fair.....      | 1 20 @1 27½ |
| Gray, common to choice.....   | 1 20 @1 32½ |
| Milling.....                  | 1 42½@1 45  |
| Surprise, good to choice..... | 1 40 @1 45  |
| Black Russian.....            | 1 12½@1 25  |
| Red.....                      | 1 15 @1 32½ |

## CORN.

Domestic product has been arriving and offering a little more freely, mainly Large White, and for same the market has been inclining to weakness, especially for corn which showed dampness or was otherwise under choice, this being the case with a considerable proportion of the immediate offerings of California product. Values for prime to choice Yellow corn, both Large and Small, remained about as last quoted.

|                                      |             |
|--------------------------------------|-------------|
| Large White, good to choice.....     | 1 10 @1 15  |
| Large Yellow.....                    | 1 17½@1 22½ |
| Small Yellow.....                    | 1 40 @—     |
| Eastern, in bulk (carload lots)..... | 1 10 @1 12½ |

## RYE.

Market is quiet and easy. Stocks in the State are given at 7500 tons, as against 2700 tons a year ago, and a still smaller quantity in 1898 and 1897.

|                          |         |
|--------------------------|---------|
| Good to choice, new..... | 87½@ 90 |
|--------------------------|---------|

## BUCKWHEAT.

Scarcely enough doing to enable giving more than nominal quotations. Demand is fair.

|                     |            |
|---------------------|------------|
| Good to choice..... | 1 80 @1 85 |
|---------------------|------------|

## BEANS.

The market is not showing much activity, but as regards quotable values and general tone has developed no changes of moment since last review. Spot offerings are not heavy, and there is an entire absence of undue selling pressure, especially on choice to select qualities. Stocks in the State on the 1st inst., according to the semi-annual statement of the Produce Exchange, were 243,000 sacks, including 135,600 sacks in San Francisco and 88,500 sacks in the southern part of the State. This is the smallest quantity reported on hand at corresponding date since 1894.

|                                  |            |
|----------------------------------|------------|
| Pea, fair to good, 100 lbs.....  | 4 00 @4 25 |
| Small White, good to choice..... | 4 15 @4 25 |
| Lady Washington.....             | 3 10 @3 25 |
| Butter.....                      | 4 01 @4 50 |
| Pinks.....                       | 2 00 @2 25 |
| Bayos, good to choice.....       | 2 50 @2 75 |
| Reds.....                        | 3 00 @3 25 |
| Red Kidney.....                  | 4 00 @4 25 |
| Limas, good to choice.....       | 5 30 @5 40 |
| Black-eye Beans.....             | 3 00 @3 25 |
| Horse Beans.....                 | 1 75 @2 00 |
| Garbanzos, large.....            | 2 00 @2 25 |
| Garbanzos, small.....            | 1 25 @1 75 |

Advices by recent mail from New York give the following review of the bean market, prices quoted being per 60-lb. bushel:

The tone of interior advices has been somewhat stronger and with a noticeable falling off in receipts the general position of the market has leaned a little more in sellers' favor. Pea beans have been particularly firm and for some days past the best stock in barrels has sold at \$2.12½; choice bag lots have gone at \$2.07½@2.10, the latter generally asked. Very few Medium offering and the price of strictly fine quality has worked up to \$2.22½@2.25. Marrow have been sustained and the movement of stock has been quite satis-

factory; it has taken the very choicest lots to reach \$2.35, nice goods selling at \$2.32½, and pretty good at \$2.30. Export orders for Red Kidney were light and these were filled at \$2.30; some receivers have refused to sell at that and the feeling on the whole is a little stronger at the close, with some jobbing sales 2½@3c. higher. White Kidney still very scarce; some urgent shipping orders are in hand and it would be easy to realize \$2.60. Yellow Eye doing a trifle better. Turtle Soup dull and outside quotation extreme. Advices from the Pacific coast indicate a higher crop of Lima than was anticipated, and there is a more confident holding; quotable at \$3.57½@3.60. We understand that contracts for several thousand bags of foreign white beans have been settled by the sellers about 1s. advance over the contract price; it is said that European markets have lately improved considerably. Prime Scotch peas about steady, but off grades slow and weak; not many green coming this way.

## DRIED PEAS.

Choice Green are in fair request, market for these being firm at prevailing rates. Niles are not now meeting with much inquiry, and to sell freely, would have to go for less than quotations.

|                             |            |
|-----------------------------|------------|
| Green Peas, California..... | 2 60 @2 75 |
| Niles Peas.....             | 1 85 @2 15 |

## WOOL.

Market has the same holiday appearance as previously noted, and that there will be any special revival of trade during the next few weeks is altogether improbable. There is nothing of consequence doing in Eastern wool centers, and conditions there are naturally being reflected here. Values remain nominally as before, holders as a rule being content to wait rather than accept less than current quotations.

|                                      | SPRING. | FALL.  |
|--------------------------------------|---------|--------|
| Humboldt and Mendocino.....          | 16 @17  | 11 @13 |
| Northern, free.....                  | 14 @15  | 9 @10  |
| Northern, defective.....             | 12 @13  | 7 @9   |
| Middle Counties, free.....           | 14 @15  | 8 @9   |
| Middle Counties, defective.....      | 11 @13  | 8 @9   |
| Southern, 12 mos.....                | 8 @10   | 10 @12 |
| Southern, free, 7 mos.....           | 9 @11   | 11 @13 |
| Southern, defective, 7 mos.....      | 8 @9    | 10 @12 |
| Oregon Valley, fine.....             | 17 @18  | 10 @12 |
| Oregon Valley, coarse to medium..... | 16 @17  | 10 @12 |
| Eastern Oregon, choice.....          | 13 @15  | 10 @12 |
| Eastern Oregon, fair to good.....    | 10 @12  | 10 @12 |
| Nevada, as to condition.....         | 11 @15  | 10 @12 |

|                             |        |
|-----------------------------|--------|
| Humboldt and Mendocino..... | 11 @13 |
| Middle County.....          | 9 @10  |
| San Joaquin.....            | 7 @9   |
| San Joaquin Lambs.....      | 8 @9   |

## HOPS.

There is very light trading in hops at present and values in consequence are not very well defined. To purchase freely, full current quotations or more would have to be paid, while on selling pressure, lower figures than are nominally current would have to be accepted.

|                               |        |
|-------------------------------|--------|
| Good to choice 1900 crop..... | 13¼@16 |
|-------------------------------|--------|

The following report of the hop market, coming through by mail of late date, is from a New York authority:

The first three months of the season show unusually large business. Over 70,000 bales have been received since May 1, or nearly three times the amount which arrived for the same time last year. About the same proportion of increase has been shown in the exports, which are now 17,523 bales ahead of last year. This indicates an unusually early movement of the crop, and bears out the general prediction that England would need to come here to make up the deficiency in her own crop. The business of the past week has been somewhat quieter. Brewers seem to have stocked up fairly well for the present, and are not buying so freely, while the export demand is held in check by the heavy quantities awaiting shipment here or in transit from the Pacific Coast. More than 6,500 bales of this week's receipts were on through bills of lading for England. While the movement was so active dealers secured pretty good stocks, so that there are plenty of hops available, but the general outlook is considered reasonably good and there is a steady holding of most grades. Possibly our outside figures are rather extreme. A moderate quantity of hops is changing hands in this State and on the Pacific Coast, and the crop is fast passing out of growers' hands. London cables are quieter but prices well sustained, with medium grades higher.

## HAY AND STRAW.

While values for hay are being fairly well maintained, the demand is not brisk at full current rates, and under heavy arrivals, accompanied with selling pressure, weakness would very likely develop. Some of the wholesale dealers are large holders, and are in consequence interested in keeping the market from breaking.

|                    |            |
|--------------------|------------|
| Wheat.....         | 9 00@13 50 |
| Wheat and Oat..... | 9 00@12 50 |
| Oat.....           | 8 00@12 00 |

|                    |            |
|--------------------|------------|
| Barley.....        | 7 00@ 9 50 |
| Volunteer.....     | 6 00@ 8 00 |
| Alfalfa.....       | 8 00@ 9 50 |
| Stock.....         | 5 50@ 7 00 |
| Compressed.....    | 9 00@13 00 |
| Straw, ¾ bale..... | 35@ 45     |

## MILLSTUFFS.

Values for Bran have ruled fairly steady since last review, but stocks were more than ample to accommodate the immediate demand. Middlings and Shorts were not in heavy supply, but inquiry was slow, prices remaining as last quoted. Rolled Barley was steadily held. Prices for Milled Corn were without appreciable change.

|                     |             |
|---------------------|-------------|
| Bran, ¾ ton.....    | 13 50@14 50 |
| Middlings.....      | 16 50@19 00 |
| Shorts, Oregon..... | 14 00@15 50 |
| Barley, Rolled..... | 16 50@17 00 |
| Cornmeal.....       | 26 00@—     |
| Cracked Corn.....   | 27 00@—     |

## SEEDS.

Mustard Seed continues in too light stock to warrant giving quotations. Alfalfa Seed is offering in only very limited quantity, and for desirable qualities the market is firm at figures below noted. Bird Seed is quotably unchanged, with movement light.

|                          | Per ctt.  |
|--------------------------|-----------|
| Mustard, Trieste.....    | —@—       |
| Mustard, Yellow.....     | —@—       |
| Flax.....                | 2 25@2 75 |
| Alfalfa, Utah.....       | 9 @ 9¼    |
| Alfalfa, California..... | 8 @ 8¼    |

|             | Per lb. |
|-------------|---------|
| Canary..... | 3¼@ 4   |
| Rape.....   | 2 @ 2¼  |
| Hemp.....   | 3 @ 3¼  |

## BAGS AND BAGGING.

A moderate inquiry for Grain Bags is reported on next season's account, largely speculative, with values for same steady. Beyond this, there is little or nothing doing at present in the bag line. Values for Wool Sacks, Bean and Fruit Bags, continue at previously quoted range.

|                                              |        |
|----------------------------------------------|--------|
| Calcutta Grain Bags, buyer June-July.....    | 6¼@ 6½ |
| Calcutta Grain Bags, spot.....               | 6 @—   |
| San Francisco Grain Bags, 22x36, spot.....   | 5¼@ 6  |
| State Prison Bags in lots of 200, ¾ 100..... | —@—    |
| Wool Sacks, 4 lbs.....                       | —@32¼  |
| Wool Sacks, 3½ lbs.....                      | —@28¼  |
| Fleece Twine.....                            | 7¼@—   |
| Gunnies.....                                 | —@12¼  |
| Bean Bags.....                               | 4½@ 5¼ |
| Fruit Sacks, cotton.....                     | 6¼@ 7¼ |

## HIDES, PELTS AND TALLOW.

The Hido market is showing steadiness, with demand fair at prevailing rates. Quotations for Pelts remain unchanged, but inquiry is not brisk at full current figures. It is the exception when offerings of Tallow are neglected, or where full prices quoted are not obtainable when the quality is up to the regulation standard.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

|                                     | Sound.      | Culls. |
|-------------------------------------|-------------|--------|
| Heavy Steers, over 56 lbs.....      | 10 @ 9      |        |
| Medium Steers, 48 to 56 lbs.....    | 9 @ 8       |        |
| Light Steers, under 48 lbs.....     | 8¼ @ 7¼     |        |
| Heavy Cow Hides, over 50 lbs.....   | 8¼ @ 7¼     |        |
| Light Cow Hides, under 50 lbs.....  | 8¼ @ 7¼     |        |
| Wet Salted Kip.....                 | 9 @ 8       |        |
| Wet Salted Veal.....                | 9 @ 8       |        |
| Wet Salted Calf.....                | 10 @ 9      |        |
| Dry Hides.....                      | 16 @ 13     |        |
| Dry Kip and Veal, 11 to 16 lbs..... | 15@16@13@14 |        |
| Dry Calf, under 4 lbs.....          | 16 @ 13     |        |
| Salted Horse Hides, large.....      | 2 50 @—     |        |
| Salted Horse Hides, medium.....     | 2 00 @—     |        |
| Salted Horse Hides, small.....      | 1 00 @—     |        |
| Dry Horse Hides, large.....         | 1 75 @—     |        |
| Dry Horse Hides, small.....         | 1 00 @1 50  |        |
| Dry Colts' Hides.....               | 50 @—       |        |
| Pelts, long wool, ¾ skin.....       | 80 @1 00    |        |
| Pelts, medium, ¾ skin.....          | 60 @ 85     |        |
| Pelts, short wool, ¾ skin.....      | 30 @ 50     |        |
| Pelts, shearing, ¾ skin.....        | 15 @ 25     |        |
| Deer Skins, best summer.....        | 35 @—       |        |
| Deer Skins, good medium.....        | —@ 30       |        |
| Deer Skins, thin winter.....        | —@ 10       |        |
| Elk Hides.....                      | 10 @ 12     |        |
| Tallow, good quality.....           | 4 @—        |        |
| Tallow, No. 2.....                  | 3 @ 3¼      |        |
| Goat Skins, perfect.....            | 30 @ 37¼    |        |
| Goat Skins, damaged.....            | 10 @ 20     |        |
| Kid Skins.....                      | 5 @ 10      |        |

## HONEY.

The movement in this article, both inward and outward, is of necessity very light at present, and this must continue to be the case throughout the balance of the season, owing to the exceedingly limited stocks. Market is firm at quotations noted.

|                              |         |
|------------------------------|---------|
| Extracted, White Liquid..... | 7¼@ 8   |
| Extracted, Light Amber.....  | 6¼@ 7¼  |
| Extracted, Amber.....        | 5¼@ 6¼  |
| White Comb, 1 lb frames..... | 13 @14  |
| Amber Comb.....              | 11¼@12¼ |
| Dark Comb.....               | 8 @ 9   |

## BEESWAX.

Very little is coming forward and supplies here are small. Custom for offerings is readily secured at prevailing values.

|                                  |        |
|----------------------------------|--------|
| Good to choice, light, ¾ lb..... | 26 @28 |
| Dark.....                        | 24 @25 |



## LIVE STOCK AND MEATS.

The strong tone last noted as existing in the Beef market continues, with no probability of prices receding in the near future. The quoted advance on Mutton is being well maintained. Veal and Lamb were in good request, with market firm at rates quoted. Hog market ruled steady, there being no excess of offerings of desirable stock.

|                                                     |               |
|-----------------------------------------------------|---------------|
| Beef, first quality, dressed, net $\frac{1}{2}$ lb. | 7 1/2 @ 8     |
| Beef, second quality                                | 7 @ 7 1/2     |
| Beef, third quality                                 | 6 @ 6 1/2     |
| Mutton—ewes, 8 1/2 @ 9c; wethers                    | 9 @ 9 1/2     |
| Hogs, hard grain fed, medium                        | 5 1/2 @ 5 1/2 |
| Hogs, small, fat                                    | 5 1/2 @ 5 1/2 |
| Hogs, large, hard                                   | 5 1/2 @ 5 1/2 |
| Hogs, feeders                                       | 5 @ 5 1/2     |
| Hogs, country dressed                               | 6 1/2 @ 7     |
| Veal, small, $\frac{1}{2}$ lb.                      | 8 @ 10        |
| Veal, large, $\frac{1}{2}$ lb.                      | 9 @ 10        |
| Lamb $\frac{1}{2}$ lb.                              | 9 1/2 @ 10    |

## POULTRY.

Owing to continued heavy arrivals of Eastern poultry, the market has been given very little or no opportunity to improve. California poultry was not in heavy receipt, but of other than choice young stock, there was more than could be advantageously placed. Fryers and Large Broilers were most in favor, and brought best figures. Ten carloads of Eastern poultry were landed on this market the previous week and five carloads the early part of the current week.

|                                           |             |
|-------------------------------------------|-------------|
| Turkeys, live hens, $\frac{1}{2}$ lb.     | 12 1/2 @ 13 |
| Turkeys, live gobblers, $\frac{1}{2}$ lb. | 11 @ 12 1/2 |
| Turkeys, Dressed, per lb.                 | 14 @ 16     |
| Hens, California, $\frac{1}{2}$ dozen     | 3 00 @ 4 50 |
| Roosters, old                             | 3 50 @ 4 00 |
| Roosters, young (full-grown)              | 3 50 @ 4 00 |
| Fryers                                    | 3 50 @ 4 00 |
| Broilers, large                           | 3 50 @ 4 00 |
| Broilers, small                           | 3 00 @ 3 25 |
| Ducks, old, $\frac{1}{2}$ dozen           | 3 00 @ 4 00 |
| Ducks, young, $\frac{1}{2}$ dozen         | 4 00 @ 5 50 |
| Geese, pair                               | 1 75 @ 2 00 |
| Goslings, pair                            | 1 75 @ 2 00 |
| Pigeons, old, $\frac{1}{2}$ dozen         | 1 00 @ —    |
| Pigeons, young                            | 1 75 @ 2 00 |

## BUTTER.

Choice to select fresh butter was in slim receipt, both creamery and dairy product, and was favored with a firm market. Some brands in high repute brought an advance on utmost figures warranted as a quotation. For the more ordinary grades of fresh, however, the market displayed no special strength, the inquiry being mainly either for best fresh or for held and packed stock. There is more than enough of latter sort and some shipments are being made East.

|                                      |            |
|--------------------------------------|------------|
| Creamery, extras, $\frac{1}{2}$ lb.  | 20 @ —     |
| Creamery, firsts                     | 28 @ —     |
| Creamery, seconds                    | 26 @ —     |
| Dairy, select                        | 26 @ —     |
| Dairy, firsts                        | 25 @ —     |
| Dairy, seconds                       | 22 1/2 @ — |
| Dairy, soft and weedy                | — @ —      |
| Mixed store                          | 14 @ 16    |
| Creamery in tubs                     | 20 @ 22    |
| Pickled Roll                         | 20 @ 21    |
| Firkin, California, choice to select | 20 @ 21    |
| Firkin, common to fair               | 17 @ 18    |

## CHEESE.

Market shows decided firmness, especially for choice to fancy mild-flavored new, such being offered in very limited quantity, and no likelihood of there being an excess of supplies of this description for several months to come.

|                              |             |
|------------------------------|-------------|
| California, fancy flat, new  | 12 @ 13     |
| California, good to choice   | 11 @ 12     |
| California, fair to good     | 10 @ 11     |
| California Cheddar           | — @ —       |
| California, "Young Americas" | 11 @ 13 1/2 |

## EGGS.

Fresh domestic were in very moderate receipt, especially large and select white, such meeting with a stiff market and commanding higher average prices than at any previous date this season. Market throughout showed firmness. Most holders of cold storage eggs, East and here, are making a profitable clean-up this season.

|                                            |                 |
|--------------------------------------------|-----------------|
| California, select, large, white and fresh | 44 @ —          |
| California, select, irregular color & size | 37 1/2 @ 42 1/2 |
| California, good to choice store           | 32 1/2 @ 35     |
| Eastern, as to section and grading         | 27 1/2 @ 32 1/2 |
| Eastern, cold storage                      | — @ —           |

## VEGETABLES.

Onions continued in light receipt and in good request, with market firm at the quotations. The display of winter vegetables was not heavy. Fresh vegetables from Los Angeles district were in increased receipt, but they did not lack for attention and desirable qualities brought as a rule good prices.

|                                                |              |
|------------------------------------------------|--------------|
| Beans, String, $\frac{1}{2}$ lb.               | 4 @ 7        |
| Beans, Wax, $\frac{1}{2}$ lb.                  | — @ —        |
| Beans, Lima, $\frac{1}{2}$ lb.                 | — @ —        |
| Cabbage, choice garden, $\frac{1}{2}$ 100 lbs. | 1 00 @ 25    |
| Cauliflower, $\frac{1}{2}$ dozen               | 5 @ 10       |
| Cucumbers, Bay, $\frac{1}{2}$ box              | 50 @ 75      |
| Egg Plant, $\frac{1}{2}$ lb.                   | 5 @ 8        |
| Garlic, $\frac{1}{2}$ lb.                      | 4 1/2 @ 6    |
| Onions, Yellow Danver, $\frac{1}{2}$ cental    | 1 75 @ 2 00  |
| Peas, Sweet, garden, $\frac{1}{2}$ lb.         | 2 1/2 @ 5    |
| Peppers, Green Chile, $\frac{1}{2}$ box        | 40 @ 75      |
| Squash and Pumpkin, $\frac{1}{2}$ ton          | 8 00 @ 12 00 |
| Tomatoes, $\frac{1}{2}$ large box              | 25 @ 75      |

## POTATOES.

Arrivals and offerings of potatoes were tolerably heavy, especially as compared with the demand, and the market lacked firmness, more particularly for common qualities, with a liberal proportion of offerings of latter sort. Sweet potatoes were in decreased supply and more firmly held.

|                                              |           |
|----------------------------------------------|-----------|
| Burbanks, River, $\frac{1}{2}$ cental        | 30 @ 60   |
| Burbanks, Petaluma-Tomales                   | 35 @ 60   |
| Burbanks, Salinas, $\frac{1}{2}$ cental      | 85 @ 1 15 |
| Burbanks, Oregon, $\frac{1}{2}$ cental       | 55 @ 90   |
| Sweet Potatoes, Yellow, $\frac{1}{2}$ cental | 75 @ 90   |

## The Fruit Market.

Apples were in fair supply and met with moderate demand at much the same figures as were current the preceding week, but only for strictly choice to select did the market display any firmness. Lady Apples are beginning to come forward for the holiday trade, but only such as are well shaped, highly colored, with bright and waxy looking surface, can be depended on to bring good prices. Some showing handsome appearance were held at \$2.75 per box, and prices ranged down to \$1 per box and less for common qualities. Very good Lady Apples from Oregon were offered at \$2 per box. Pears were in slim supply, and for other than choice Winter Nells there was scarcely any inquiry. Persimmons moved slowly at a rather low range of values. Berries were out of market most of the week, and at no time were offered in sufficient quantity to warrant regular quotations.

|                                                 |             |
|-------------------------------------------------|-------------|
| Apples, fancy, 4-tier box                       | 1 25 @ 1 40 |
| Apples, good to choice, $\frac{1}{2}$ 50-lb box | 65 @ 1 00   |
| Apples, common to fair, $\frac{1}{2}$ 50-lb box | 25 @ 50     |
| Apples, Lady, $\frac{1}{2}$ box                 | 1 00 @ 2 50 |
| Grapes, Verdel, $\frac{1}{2}$ box               | — @ —       |
| Raspberries, $\frac{1}{2}$ chest                | — @ —       |
| Pears, Winter Nells, $\frac{1}{2}$ box          | 60 @ 1 25   |
| Pears, common kinds, $\frac{1}{2}$ box          | 40 @ 75     |
| Persimmons, $\frac{1}{2}$ box                   | 40 @ 65     |
| Strawberries, Longworth, $\frac{1}{2}$ chest    | — @ —       |
| Strawberries, Large, $\frac{1}{2}$ chest        | — @ —       |

## DRIED FRUITS.

There is no improvement to note in the condition of the market for cured and evaporated fruits. Jobbers assert that they are doing little or nothing, and all outward appearances corroborate the statement. Offerings from first hands are receiving virtually no attention, and when sales are effected, it is almost without exception the result of selling pressure, and at less than the nominal quotations now current. Jobbers are carrying considerable stock, and are not disposed to load up further, unless at temptingly low figures, sure to bring them a handsome profit. Holders who are forcing sales at present are certainly not acting in their own interests. The close of the year is invariably a dull time in the dried fruit trade, and while dullness may be more pronounced than in most previous years, the general condition is by no means phenomenal or extraordinary. No revival of trade is looked for until after the holidays, and that it is poor policy for producers to attempt to unload under existing conditions seems to admit of no question. Packers and jobbers are not endeavoring to slaughter their holdings because they cannot immediately dispose of them at figures which the goods should command, and why should producers be any more justified in accepting any sort of an offer because there happens to be no positive demand for the time being? A revival of trade is looked for in the spring months and may be experienced sooner. Conditions certainly cannot be any more unfavorable for unloading than at present, a fact recognized by those who are taking advantage of the existing dullness and weakness, and are securing decided bargains when opportunity presents through the selling pressure of such holders as insist on immediately realizing, regardless of prices obtainable.

## EVAPORATED OR BLEACHED.

|                                                      |                |
|------------------------------------------------------|----------------|
| Apricots, Royal, prime                               | 6 1/2 @ 7      |
| Apricots, Royal, choice, in sacks, $\frac{1}{2}$ lb. | 7 1/2 @ 8      |
| Apricots, Royal, fancy                               | 9 @ —          |
| Apricots, Moorpark                                   | 9 1/2 @ 11 1/2 |
| Apples, in 50-lb boxes, rings, pressed, fancy        | 5 1/2 @ 5 1/2  |
| Apples, 50-lb boxes, rings, pressed, good to choice  | 3 1/2 @ 4 1/2  |
| Figs, White, fancy pressed                           | 6 @ 7          |
| Nectarines, $\frac{1}{2}$ lb.                        | 4 @ 6          |
| Peaches, unpeeled, fancy                             | 6 @ 6 1/2      |
| Peaches, unpeeled, choice                            | 5 @ 5 1/2      |
| Peaches, peeled, in boxes                            | 11 @ 14        |
| Pears, unpeeled Bartlett's, halved, fancy            | 5 @ 6          |
| Pears, halved, unpeeled Bartlett's                   | 3 1/2 @ 4 1/2  |
| Pears, quartered, unpeeled Bartlett's                | 3 1/2 @ 4 1/2  |
| Plums, Black, pitted                                 | 4 @ 5          |
| Plums, White and Red                                 | 5 @ 6          |
| Prunes, Silver                                       | 4 1/2 @ 6      |

## COMMON SUN-DRIED.

|                   |               |
|-------------------|---------------|
| Apples, sliced    | 2 @ 3         |
| Apples, quartered | 2 @ 3         |
| Figs, Black       | 1 1/2 @ 2 1/2 |
| Figs, White       | 2 1/2 @ 3 1/2 |
| Peaches, unpeeled | 4 @ 5         |

Prices for 1900 crop Prunes, as named by the California Cured Fruit Association: Santa Clara, four sizes, 3c. per lb.; 40-50s, 7c.; 50-60s, 5 1/2c.; 60-70s, 3 1/2c.; 70-80s, 3 1/4c.; 80-90s, 2 3/4c.; 90-100s, 2 1/4c.; 100-120s, 2c., which is the uniform price for this

grade; Sonomas, other than smallest, 3/4c. less; other districts, 1/4c. less, except for smallest; Ruby, 1/4c. premium.

Advices of late date coming by mail from New York, give the following report of the Eastern dried fruit market:

Demand for evaporated apples has been moderate, but there has not been much stock to trade on and market has ruled quiet and easier. Prime has sold from 5@5 1/2c., possibly a fraction higher in a jobbing way, with choice and fancy selling to a moderate extent within ranges quoted. Sun dried apples are in light supply and also chops and waste, with tone steady for desirable grades; in fact cores and skins are rather firm and occasionally bringing a premium. Small fruits scarce and higher, tone firm except huckleberries which are easy. California fruit fairly active at ranges quoted:

|                                                           |               |
|-----------------------------------------------------------|---------------|
| Apricots, Cal., Moorpark, 1900                            | 10 @ 15       |
| Apricots, Cal., Royal, 1900, $\frac{1}{2}$ lb.            | 8 @ 9         |
| Peaches, Cal., unpeeled, 1900, in bxs, $\frac{1}{2}$ lb.  | 7 @ 9         |
| Peaches, Cal., unpeeled, 1900, in bags, $\frac{1}{2}$ lb. | 7 @ 8         |
| Prunes, Cal., 1899, $\frac{1}{2}$ lb.                     | 3 1/2 @ 8 1/2 |

## RAISINS.

The market is very quiet, and while Association rates remain unchanged, there are some outside holdings still going at less than current quotations, although the quantity being thus offered is not large, and in some instances the quality is as much under the regular standard as is the price.

## F. O. B. FRESNO DELIVERY.—CARLOAD LOTS.

|                                                     |          |
|-----------------------------------------------------|----------|
| Imperial Clusters, 6-crown, $\frac{1}{2}$ 20-lb box | 3 00 @ — |
| Dehesa Clusters, 5-crown                            | 2 50 @ — |
| Fancy Clusters, 4-crown                             | 2 00 @ — |
| London Layers, 3-crown, $\frac{1}{2}$ box           | 1 60 @ — |
| do do 2-crown, $\frac{1}{2}$ box                    | 1 50 @ — |

(Usual advance for fractions.)

|                                                     |           |
|-----------------------------------------------------|-----------|
| Loose Muscatel, 4-crown standard, $\frac{1}{2}$ lb. | — @ 7     |
| Loose Muscatel, 3-crown                             | — @ 6 1/2 |
| Loose Muscatel, 2-crown standard                    | — @ 6     |
| Loose Muscatel, seedless                            | — @ 6 1/2 |

(Above prices for loose raisins are for 50-lb boxes.)

Thompson Seedless.—Bleached fancy,  $\frac{1}{2}$  lb., 12c; choice, 11c; standard, 10c; prime, 9c. Unbleached 7 1/2 @ 9c.

Sultanas.—Bleached fancy,  $\frac{1}{2}$  lb., 10 1/2c; choice, 9 1/2c; standard, 8 1/2c; prime, 8c. Unbleached, 7 @ 8c.

## CITRUS FRUITS.

Oranges continue to move slowly, especially the large sizes, the weather having been unfavorable for consumers taking hold. Peddlers and small retailers have been the principal buyers, these giving the small sizes the preference. Lemon market was without improvement, and was especially weak for other than choice to select. Limes were in good supply and market was favorable to buyers.

|                                              |             |
|----------------------------------------------|-------------|
| Oranges—Navel, $\frac{1}{2}$ box             | 1 50 @ 2 50 |
| Valencia, $\frac{1}{2}$ box                  | — @ —       |
| Seedlings, $\frac{1}{2}$ box                 | 1 00 @ 1 50 |
| Tangerines, $\frac{1}{2}$ box                | 75 @ 1 50   |
| Grape Fruit, $\frac{1}{2}$ box               | 1 25 @ 2 50 |
| Lemons—California, select, $\frac{1}{2}$ box | 2 25 @ 2 50 |
| California, good to choice                   | 1 50 @ 2 00 |
| California, common to fair                   | 75 @ 1 25   |
| Limes—Mexican, $\frac{1}{2}$ box             | 4 00 @ 4 50 |
| California, small box                        | 50 @ 75     |

## NUTS.

Almonds are not receiving any special attention, and although there are not many offerings, the market is weak at the quotations. Values for Walnuts remain fairly steady, and that it will be necessary to carry over any noteworthy quantity of desirable quality does not now seem probable.

|                                                    |                |
|----------------------------------------------------|----------------|
| California Almonds, shelled                        | 23 @ 26        |
| California Almonds, paper shell, $\frac{1}{2}$ lb. | 12 @ 14        |
| California Almonds, soft shell                     | 10 @ 12        |
| California Almonds, hard shell                     | 6 @ 7          |
| Walnuts, White, soft shell                         | 8 1/2 @ 10 1/2 |
| Walnuts, White, California, standard               | 7 1/2 @ 10     |
| Chestnuts, California Italian                      | — @ —          |
| Peanuts, California, fair to prime                 | 4 @ 5          |
| Peanuts, Eastern, hand-picked                      | 5 1/2 @ 6      |
| Pine Nuts                                          | 5 @ 6          |

## WINE.

While the market is quiet, so far as transfers of new wine from first hands are concerned, the inactivity is more due to due light offerings and little or no pressure to realize, than to lack of inquiry or of opportunity to sell to advantage. The market is firm, with every prospect of so continuing during the balance of the season. Dry wines of this year's vintage are now commanding 1@2c per gallon more than when the current season opened. Market may be said to be quotable at 15@20c per gallon, as to quality and locality. There is little obtainable as low as 15c, and only extra select would command 20c in a regular way. This week's Panama steamer took 74,301 gallons and 60 cases, 61,140 gallons of the shipment being destined for New York.

## Horticulturists and Vineyardists.

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APPENDIX.—Plowing and preparing the soil: Method of using chemical manures. FORMULA OF MANURES.—Wheat, barley, oats, rye, natural pastures, hemp, rape seed (colza), beets, carrots, cabbages, hops, gardenings, potatoes, grape vines, and small trees, turnips, rutabagas, Jerusalem artichokes, sorgo, sugar cane, maize, beans, horse beans, peas, clover, alfalfa, vetches, lucern; Rotation of crops. VOCABULARY OF CHEMICAL MANURES.—Nitrogenized substances; Sulphate of ammonia; Nitrate of soda; Nitrate of potassa; Phosphate of lime; Sulphate of lime. Index.

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## Produce Receipts.

Receipts and exports of leading cerea and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

| FOR THE WEEK.              | Since July 1, 1900. | Same time last year. |
|----------------------------|---------------------|----------------------|
| Flour, $\frac{1}{4}$ sacks | 157,029             | 2,781,844            |
| Wheat, centals             | 245,284             | 2,731,280            |
| Barley, centals            | 24,900              | 2,227,812            |
| Oats, centals              | 8,245               | 428,761              |
| Corn, centals              | 2,920               | 52,035               |
| Rye, centals               | 1,340               | 93,992               |
| Beans, sacks               | 19,835              | 431,338              |
| Potatoes, sacks            | 53,920              | 739,636              |
| Onions, sacks              | 3,141               | 115,768              |
| Hay, tons                  | 2,921               | 89,490               |
| Wool, bales                | 821                 | 21,412               |
| Hops, bales                | 89                  | 5,628                |

## EXPORTS BY SEA.

| FOR THE WEEK.              | Since July 1, 1900. | Same time last year. |
|----------------------------|---------------------|----------------------|
| Flour, $\frac{1}{4}$ sacks | 92,260              | 1,545,312            |
| Wheat, centals             | 6                   | 2,374,812            |
| Barley, centals            | 2,612               | 1,371,841            |
| Oats, centals              | 84                  | 46,748               |
| Corn, centals              | 201                 | 923                  |
| Beans, sacks               | 120                 | 7,187                |
| Hay, bales                 | 1,015               | 79,039               |
| Wool, pounds               | —                   | 233,621              |
| Hops, pounds               | 5,071               | 366,800              |
| Honey, cases               | —                   | 1,600                |
| Potatoes, packages         | 5,596               | 49,221               |

## California Dried Fruit at New York.

New York, Dec. 12.—Evaporated apples, common, 4@4 1/2c; prime wire tray, 4 1/2@5 1/2c; choice, 5 1/2@6c; fancy, 6 1/2@7c.

California Dried Fruits.—Moderate business at generally unchanged values.

Prunes, 3 1/2@3 3/4c.

Apricots, Royal, 11@14c; Moorpark, 15@17c.

Peaches, unpeeled, 6@9c; peeled, 16@20c.

## Seeds that Surely Grow.

The cost of seeds compared with the value of the crop is so small that a few cents saved by buying second rate seeds will amount to many dollars lost when the harvest is gathered. Farmers have found out by many costly failures that a risky thing it is to buy seeds without being pretty sure that they are reliable and true to name. The latest catalogue of the seed house of D. M. Ferry & Co., of Detroit, Mich., is a reminder that thousands of farmers in the United States and Canada have pinned their faith to the reputation of this great firm. During a business career approaching half a century in time Ferry's seeds have won an annual increase in popularity, which is perhaps the best evidence that they grow and give satisfaction. Ferry's Seed Annual for 1901 is a useful guide in selecting seeds for the farm, the truck garden and the flower garden. It is sent free on application.



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### Valuation of Bearing Fruit Trees.

It will be comforting to owners of bearing fruit trees to read some testimony given in the Butte county Superior Court, Judge E. E. Gaddis of Yolo county presiding, and recorded by the Oroville Register. The case was that of Butte county vs. R. Power of Olive district. The county seeks to put a road through the orange grove of Mr. Power, and the latter has brought suit against the county for damages. He introduced the witnesses who gave testimony.

Mr. Joseph Gardella stated that he had lately visited and inspected the land in question. He found on the tract needed for road purposes forty-four Picholine olive trees, thirty-eight seedling orange trees and eight fig trees. All these trees are in bearing condition.

He valued the rough land at \$25 an acre, and estimated that by the time it had been cleared, leveled, plowed and planted, it was worth \$100 an acre. The olive trees, when set out, he figured at 50 cents apiece. The same value was placed on the orange trees. He figured that it would cost from \$15 to \$20 an acre to care for the land and trees until the trees were producing fruit enough to pay expenses. He found the trees in question to be good, thrifty ones, and deemed that the land, with the bearing trees, ought to worth \$2000.

D. H. Murray, superintendent of the Oroville Citrus Association, who has had thirty years' experience in growing trees and caring for orchards, figured as follows: Thirty olive trees at \$30 each; fourteen olive trees at \$20 each, or \$1180 for the olive trees. He figured twenty-six orange trees at \$20 each, and twelve at \$16 each, making a total of \$700. The fig trees he placed at \$5 each or \$40 for the trees. The land he placed at \$147 for the 1.47 acres, or a total of \$2067 for the land and trees.

Geo. B. Springer, who has had an experience of twenty years in this locality in growing orange and olive trees, and in selling fruit from each, was a witness, and his estimate for the olives was that the trees would average 200 pounds. He got for his Picholine olives, when hauled and delivered to the mill, 2 1/2 cents a pound. He stated that it cost him 1 cent a pound to pick and deliver the olives, making 1 1/2 cents free. This would give him \$2.50 per tree. He figured at the rate of 7% interest, and on this basis each olive tree would be worth \$35.

The forty-four olive trees at \$35 per tree would give \$1540. The thirty-eight orange trees he estimated at \$10 each, making \$380, while the land itself and the fig trees brought his estimate up to \$2107 for 1.47 acres.

The trees are ten years old. If then, in round numbers, we estimate the tract at an acre and a half, and \$2100 its value, then we would have \$1400 an acre as the value of ten-year-old orange and olive trees.

[We presume the County Assessor was taking notes of these figures and we shall hear later what the growers think of them as a basis of taxation.—Eds.]

### How's This?

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Hall's Family Pills are the best.

### Jerseys at Petaluma.

Some months ago a shipment of Jerseys was received in Petaluma by Messrs. Denman, McNear and W. D. Houx, numbering five head, from the well-known breeders of Pennsylvania—Miller & Sibley. The Argus says: Two of these heifers were for W. D. Houx, namely, Pomona of Prospect Second and Gypsy Bess of Prospect Second. These two heifers are from the best stock in the United States, as the following names of cows and their seconds will show:

Pomona of Prospect Second—Her dam Pomona of Prospect; test 20 pounds 6 1/2 ounces butter in seven days as a two-year-old. Her granddam, Gypsy's Bessy Duchess, test, 28 pounds 6 1/2 ounces butter in seven days as a six-year-old. Her great granddam, Ida of St. Lambert, test, 30 pounds 2 1/2 ounces in seven days, official test. And on her sire's side she is granddaughter of Ida's Rioter of St. Lambert and great granddaughter of Old Stoke Pogis the Fifth.

Gypsy Bess of Prospect Second—Her dam, Gypsy Bess of Prospect; test, 22 pounds 10 1/2 ounces butter in seven days as a three-year-old; full sister to Bess Pogis of Prospect, 29 pounds 1 1/2 ounces butter in seven days.

Her granddam, Flower of Merridale, test, 26 pounds 11 1/2 ounces butter in seven days. On her sire's side she is granddaughter of Ida's Rioter of St. Lambert and Gypsy's Lorne Pogis, and both of these sires are sires of a great many high testing cows.

Mr. Houx has now added to his herd a fine young bull from J. P. Bradbury of Pomeroy, Ohio. This young bull, from his breeding, ought to be first-class, for in his pedigree we find:

His dam, King's Riotress Elsie—test, 22 pounds 8 ounces butter in seven days.

Granddam, Maid's Riotress—test, 21 pounds 14 ounces butter in seven days.

Granddam, St. Lambert's Riotress—test, 24 pounds 6 ounces butter in seven days.

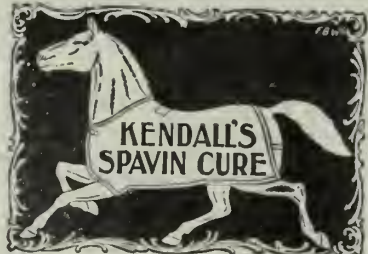
Great granddam, Allie of St. Lambert—test, 26 pounds 12 ounces butter in seven days.

Great granddam, Letty Rioter—test, 24 pounds 2 ounces butter in seven days.

This last importation gives Mr. Houx nine head of thoroughbred Jerseys. He has twenty-five grades in his herd. The past year his cows averaged 5,800 pounds of milk, testing 4.7 per cent butter fat. Mr. Houx thinks that the time is coming when Jerseys will be in demand and that dairymen will look more to the special purpose cow than to the all-purpose cow.

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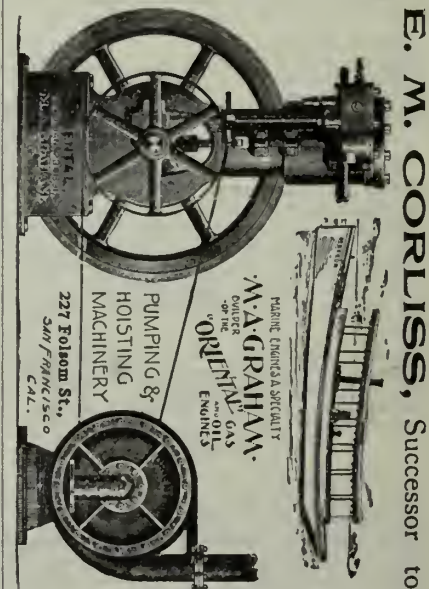
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Napa Grange: Master, A. W. Robinson; Overseer, C. G. Bates; Eec-turer, D. J. Brown; Chaplain, James Wilson; Steward, H. R. Borrette; Treasurer, H. N. Fassett; Secretary, O. E. Borrette; Gate Keeper, William Penland; Assistant Steward, W. G. Thompson; Lady Assistant Steward, Nellie Borrette; Ceres, Mrs. M. A. McCollam; Flora, Mrs. H. M. Swift; Pomona, Mrs. A. W. Robinson. They will be installed the first Saturday in January, 1901.

Two Rock Grange: Master, Theodore G. King; Overseer, James Carmody; Lecturer, A. P. Martin; Steward, Silas Stice; Assistant Steward, Frank Doss; Chaplain, Mrs. E. C. Hinshaw; Treasurer, John Sales; Secretary, Herman Church; Gate Keeper, N. Niles; Pomona, Mrs. J. C. Purvine; Flora, Mrs. A. P. Martin; Ceres, Mrs. Herman Church; Trustee for long term, J. C. Purvine; Organist, George W. Gaston.

Petaluma Grange: Master, C. D. Grover; Overseer, David Walls; Lecturer, Albert Hall; Steward, Henry Eastman; Assistant Steward, M. D. Hopkins; Chaplain, Mrs. M. L. Park; Secretary, Mrs. C. A. Williams; Treasurer, J. Caltoft; Gate Keeper, J. Rodenhurst; Pomona, Miss Robinson; Robinson; Flora, Miss Mamie Caltoft; Ceres, Miss Cassie McGlynn; Lady Assistant Steward, Mrs. Drennon; Trustee for long term, Mrs. D. M. Winans; Trustee for short term, Mrs. Alice Johnson; Organist, Miss Blanche McNally. The officers will be installed on the second Saturday in January by Past Master George W. Park.

### The Contra Costa Almond Growers.

The Contra Costa Almond Growers' Association met at Brentwood Dec. 8. According to the Antioch Ledger the meeting was an enthusiastic one, and members expressed satisfaction at the ultimate outcome of last season. The association is in a prosperous condition and the wind-up of business affairs left it perfectly free from debt. The association was organized about eighteen months ago for mutual protection, and the satisfactory results attained are gratifying to all. The membership has increased to sixty-three, and more signified their intention of joining before the expiration of the next almond season. The increase in the almond acreage is worthy of note.

The annual election of officers resulted as follows: President, Thomas Murphy of Brentwood; vice-president, Amos M. Graves of Antioch; secretary-treasurer, Richard J. Trembath of Antioch (re-elected); executive committee, James O'Hara of Oakley, W. F. Pearee of Brentwood and William Shafer of Brentwood.

All the almond growers have received their money for last season's crop. The members of the association feel well pleased and look forward to larger crops next year. The amount of money distributed in this vicinity to the members of the Almond Growers' Association is \$44,735. This is quite a neat little sum to be distributed among the growers.

James O'Hara of Oakley and William Shafer and E. W. Steding of Brentwood are probably the largest individual growers of almonds in Contra Costa county.

A great deal of this fruit is grown on what is known as the sand land—land that James O'Hara was told he would starve to death on, but which now furnishes an excellent living and profit to its several owners. The following gives the number of almond trees in the county east of Antioch on the first of June, 1900, is as follows: Number of bearing trees 191,393, non-bearing trees 22,313.

Coughs & Colds Cured with R. Hall's Pulmonary Balsam.

### Cloverdale Citrus Fair.

CLOVERDALE, December 4.—Talk today on the streets was all about the coming citrus fair, Cloverdale's great midwinter festival. The annual meeting of stockholders for the election of a new board of directors was held Monday evening and a large crowd was present and considerable important business relative to the coming fair was transacted. The association is free from debt, the success of last year's fair having permitted the paying off of all indebtedness. With this excellent state of affairs, the new directors are all representative citizens and are as follows: W. T. Brush, S. R. Sample, G. Hagmayer, J. J. Barnes and E. Shelaford.

There is some talk of enlarging the pavilion to comply with the new features that will be added to the fair. The orange crop is the largest in the history of the valley, the fruit larger and of finer quality. The ten-acre grove of the Cloverdale Orange Company will turn out a fine crop and the company will be one of the largest exhibitors at the fair. The fair will be held some time during February.

### The Value of "California Vegetables."

As publishers of "California Vegetables in Garden and Field," we are gratified at the testimonials of value and merit which the book is receiving. The following is a part of a letter addressed to the author by a Nebraska farmer, who recently bought several hundred acres fine land in the Napa valley and proposes soon to make a home on the property. What he says about our book should be suggestive to others who want to know more about how to succeed in California:

I have bought both of your books, but I have first given attention to "California Vegetables." I have read this work through and through, and I am now studying it chapter by chapter, and it is impossible for me to say how very much further ahead I am in knowledge about everything relating to California conditions than I could possibly have been without it. From every portion of the work I have learned much that will help me, but I feel that from Chapters III, IV, VII, IX and X I have learned more than I could have expected to from my own experience during a residence of several years in the State.

While this book must be a great aid to large numbers who already live in your State, it is to those who, like myself, have been used to such different conditions and expect to move to California that it is of such special and inestimable value. I feel it my duty to send you this expression of thanks for your grand volumes.

JOHN WILSON.

### The United States Army.

The annual report of Adj. Gen. Corbin to the Secretary of War for the year ending June 30, 1900, is a complete statistical record of the army of the United States. It shows that the regular army consists of 2535 officers and 63,861 enlisted men, and the volunteer army of 1548 officers and 31,059 enlisted men, a grand total of 98,790, not including the hospital corps, which is not counted as a part of the effective strength of the army. The regular and volunteer army at present is distributed as follows: United States, 998 officers, of whom 76 are volunteer officers and 18,898 enlisted men, all regulars. Alaska, 41 officers, 1088 enlisted men. Porto Rico, 98 officers, 2406 enlisted men. Cuba, 260 officers, 5468 enlisted men. Philippine islands, 2367 officers, 69,161 enlisted men. Hawaiian islands, 6 officers, 219 enlisted men. China, 80 officers, 2060 men. There are 879 volunteer enlisted men in Porto Rico and 30,200 in the Philippines. These are the only places where volunteer enlisted men are serving.

### Federal Work on the San Joaquin River.

WASHINGTON, December 5.—Secretary Root to-day transmitted to Speaker Henderson, with his approval, the report of Lieutenant-Colonel W. H. Heuer on a preliminary examination of the San Joaquin river with a view to



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### List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
PIONEER PATENT SOLICITORS  
FOR PACIFIC COAST.

FOR THE WEEK ENDING NOV. 27, 1900.

- 662,757.—JAR CLOSURE—Mae Birney, New Whatcom, Wash.
- 662,665.—CULTIVATOR—G. L. Bradley, Palaha City, Wash.
- 662,684.—PAVING BLOCK PRESS—J. Brewer, Oakland, Cal.
- 662,685.—AMALGAMATOR—I. P. Clarke, Alameda, Cal.
- 652,895.—UNDERREAMER—W. Duncan, Los Angeles, Cal.
- 662,563.—HAND CAR—Hall & Gray, San Marcos, Cal.
- 662,623.—GRATE BAR—T. W. Heintzelman, Sacramento, Cal.
- 662,597.—SIDEWALKS, ETC.—P. H. Jackson, S. F.
- 662,625.—TYPE CASE—H. L. Keyte, Merlin, Or.
- 662,871.—FIREPROOF STRUCTURE—D. Kilpatrick, Los Angeles, Cal.
- 662,540.—VEHICLE AXLE—A. C. Massey, Los Angeles, Cal.
- 662,677.—HOOK AND EYE—Nevada McMahon, S. F.
- 662,573.—REPRODUCING TYPE—W. H. B. Millor, Oakland, Cal.
- 662,576.—ROLL PAPER HOLDER—T. C. Phillips, S. F.
- 662,818.—SHINGLE JOINTER—J. Randall, Gate, Wash.
- 662,552.—STEAM TRAP—J. St. Mary, S. F.
- 662,597.—PHOTO MOUNT—P. J. Stuparich, S. F.

BROWN BROS., Lewistown, Ill., under date of Sept. 10th, wrote to Fleming Bros., chemists, Union Stock Yards, Chicago, a strong testimonial as to the efficacy of their Lump-Jaw Cure, saying: "With the three bottles we got of you last spring we cured nine steers. Some of them were very bad in the advanced stage. They soon got well and we fattened the steers out with 91 others. They were sold last week in the Chicago market and passed inspection all O. K."

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## California .:

## .:Vegetables

IN . . .

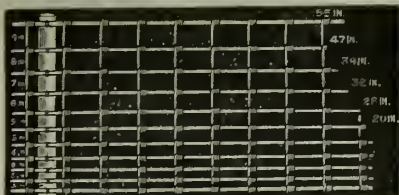
### Garden and Field.

By PROF. E. J. WICKSON.  
Published by "Pacific Rural Press" of San Francisco.

A Practical Guide to Success in California.  
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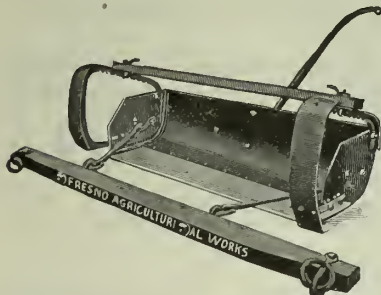




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## THE VETERINARIAN.

Answers by Dr. Creely.

### DOG WITH RHEUMATISM.

TO THE EDITOR:—My fox terrier bitch is suffering badly from rheumatism—first in hind leg and then in fore leg. She is very lame and miserable and howls when I carry her about. She is a bitch I brought with me from home and I would not like to lose her, she is so game and faithful. Will Dr. Creely oblige me with a prescription through your esteemed paper?—W. J. B. MARTIN, Redding.

Salicylate soda, 120 grains; nitrate potash, 120 grains; antikamnia, 120 grains.  
Mix; make 24 capsules and give 2 daily.  
Dilute alcohol, 4 ounces; tinct. iodine, 4 ounces; sulphuric ether, 2 ounces; oil sassafras, 2 drachms.  
Mix, and apply to affected parts once daily.

### A CASE WHICH NEEDS DIAGNOSIS.

TO THE EDITOR:—I have a mastiff five years old, always ravenously hungry, but does not assimilate his food; very poor, and getting poorer. He is much troubled with fleas, for which he is frequently washed. He is fed on corn meal cooked in milk, and meat. If fed milk, or more than usual amount of any food, his bowels become very loose. He has been inclined this way from a puppy, but is getting worse.—L. C., Napa.

It is some organic trouble; it would be necessary to see the animal. Consult Dr. Defoe of Napa and he will report to me. No expense will attach.

### PROBABLY A CASE OF POISONING.

TO THE EDITOR:—I should like to know through your Veterinary Department what is the matter with my six work horses and what to do for them. First, they will not stand being tied up to anything by the head. They want to rear up, lunge forward and fall backward. In harness they are very dull, and when stopped for a moment will not stand still, but will rear and cut up. They have a whitish yellow discharge from the nostrils; eyes look dull and they act as if partially blind. They have fallen off in flesh rapidly, one after another being taken in the same manner, only the leaders; or high-lifted ones, having it more acutely than the others. I have been feeding good oats, but poor volunteer grain hay with some bronco grass in it. Could it be a case of rattle-weed? No lameness apparent at all in the legs.—OLD SUBSCRIBER, Lower Lake.

It is due to a poisonous weed, most likely in the hay. Stop using the feed, make a complete change and give 3 drachms daily bromide potash,

### ALL FROM A BAD TOOTH.

TO THE EDITOR:—I have recently come in possession of a young horse that does not seem to be doing well. He is a big rawboned animal, and while he is a good feeder his feed does not keep him in good condition, his coat is rough and his skin seems dry and harsh, he has within a few days contracted a cough that has a bad effect. He is weak, and a drive of five miles puts him in a lather, while his mate will hardly lay a hair. I have never seen him stand square on all feet, his one hind foot is always at ease, either one or the other, his eyes are lusterless and he has a general dejected look. I work and drive him some, but he is too unsatisfactory to handle. He does not run at the nose, but continually drools and has a filthy looking mouth. I have been feeding him condition powders on damp grain, but it don't seem to have any effect; the amount that scours his mate don't seem to have the slightest apparent effect on him. Can Dr. Creely with this description suggest treatment?—L. S. HARMAN, Rosedale.

His mouth is locked from a projecting molar. Employ a first-class veterinary dentist and give ground feed slightly moistened, also the condition powders prescribed in a recent issue of the PACIFIC RURAL PRESS.

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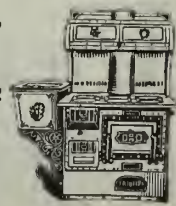
is still in the lead. Reports from the THREE GREAT FAIRS of the Pacific coast show that after meeting the best herds in California, Oregon and Washington, we can rightfully claim to have the Champion Herd of the coast. Look at the record. California State Fair, 15 ribbons; Oregon State Fair, 15 ribbons; San Francisco and San Mateo Fair, 20 ribbons, making a total of 53 ribbons. Our large sales to visitors to the fairs show what they thought of the stock, and we have very few salable pigs left. If you are in need of stock, write us and we will describe what we have.

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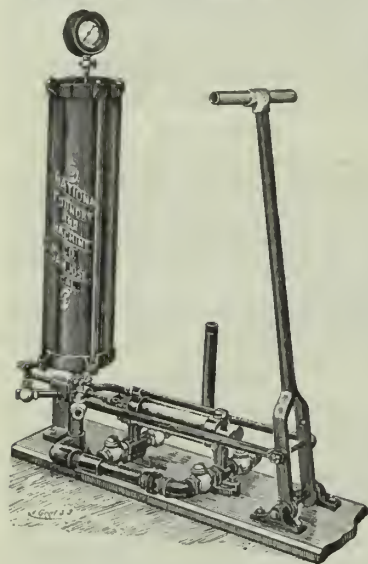
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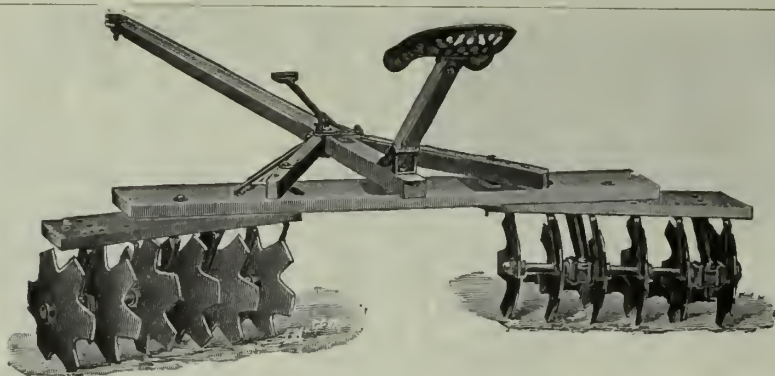
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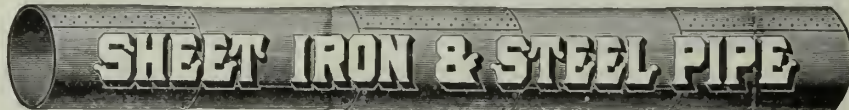
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 25.

SAN FRANCISCO, SATURDAY, DECEMBER 22, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.

### Working Over Orange Trees.

The wide disposition to concentrate on the Washington Navel orange has resulted in a great amount of grafting over during the last few years at the south. Not only have thousands of old seedlings been given new Navel tops, but many varieties once thought desirable (like the Mediterranean Sweet) have been snuffed out in the same way. It does not mean that the displaced varieties were not good, but that the Navel is better, and the preponderance of this variety is now more marked than ever. Were it not that some new varieties are held to be earlier, and others (both new and old) are later than the Navel, they too would be but little heard of. In his treatise on citrus growing, Mr. B. M. Lelong gives good points on working over orange trees, which we reproduce because the orange is such a prominent fruit issue now in many parts of the State.

Old orange trees are worked over both by budding and grafting, though the latter is not widely practiced. Budding is done in new shoots forced out by amputating the old top, as shown in Fig. 1. This is an old way, but it is not so widely practiced as formerly; it is more fashionable to use a large plate bud and insert it under old bark. Thus a bud with a plate an inch and a half long and half as wide is sometimes used. Such a bud is pushed up from a crosscut made at the bottom of the slit instead of at the top, as in ordinary budding. This avoids the danger of water getting behind the bud, etc. When the bud is in place it is held fast with a waxed band until the bud starts. Sometimes a ring of bark is taken from the stock above the bud to check the rise of the sap, and sometimes part of the limb above the bud is cut away for the same reason. It is quite important in working in old bark to have an abundant sap flow, and for this reason budding is done earlier in the spring than formerly. When the buds start, the limbs into which they have been placed are gradually cut away to push the bud, which is better than cutting entirely away at first, as it is believed to keep the sap moving. Whenever any bark is exposed to the sun by cutting back the top, it should immediately be whitewashed to prevent sunburn. Fig. 2 shows the start of buds inserted in the branches at various heights.

A very successful way of budding is that followed by O. D. Wilhite of Riverside, as recorded by Mr. Lelong. He removes all limbs (below the line of buds) that are not needed in the process of budding. He also removes the small branches near the line of buds, to induce flow of sap at points where the buds are to be inserted. By this double removal he concentrates the flow of sap over a limited part of the tree and also at the special line of bud insertion. This is



Fig. 1.—Cut Back to Force New Shoots for Budding.



Fig. 2.—Buds in Branches at Various Heights.

done in the early spring. When the tree responds by increased growth, as it soon will, the sap is circulating in vigor and the buds are inserted. The buds are tightly covered with waxed cloth, which is allowed to remain until the buds are well established. Where the buds have not taken, new buds are inserted. Wherever a sufficient number of buds have taken, the top is entirely removed and the wounds covered with heated wax. A heavy coat of whitewash is applied before the removal of the limbs. This coating is carried above the point of cutting and over the waxed cloth, and the whole surface is to be covered with the lime except a band where the cloth rests. When the cloth is removed the clear strip beneath can easily be seen in future observations of the buds. (Fig. 3)



Fig. 3.—Cut Back to Push Buds in Old Bark.



Fig. 4.—Large Seedlings Budded to Washington Navel in a Riverside Orchard.

First let all new sprouts grow. These will appear over the entire tree surface, and will keep the sap in motion and the roots in action. Pinch the fast growing buds to strengthen their trunks and to remove a few of the sprouts which have grown near them and threaten to smother them. As the buds grow, the remaining sprouts are from time to time removed, being careful, early in their growth, to keep a sufficient sprout growth to maintain a rapid flow of sap. The top of the tree should now be free from sprouts and occupied only by the buds. The bud growth must be often pinched, to prevent a long, straggling, weak growth. Large trees treated in this manner should appear with a solid bud growth, as in the illustration of the Riverside orchard, with one season's growth on the buds.



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E. J. WICKSON..... Horticultural Editor.

San Francisco, December 22, 1900.

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## The Week.

The flight of the days brings us again to the verge of the holiday season, and everyone seems to be entering upon it with eagerness passing that of recent years. The city is thronged with Christmas shoppers; avenues of trade are crowded; everyone is hurrying, either on work or traffic bent. Evidently there will be a merry Christmas this year in many homes. The outlook favors holiday indulgence beyond that of recent years. It is true that some parts of the State are anxiously watching for more rain; that in other parts they are watching for trade to move products which are in large volume, and there are other occasions for apprehension which one inclined that way can hug with gloomy satisfaction to his heart's content. We recognize the fact that some things might be jollier here and there, and, if we had the making of the world, we would have them so; but, as we were not consulted in cosmogony, we can best make the best of it all and go ahead with our several duties and destinies as best we can. It is indeed a sad one who can not find some reason to rejoice and to make others happier, and the time for such things is just at hand. We hope all readers of the PACIFIC RURAL PRESS will have a merry Christmas, and this means a great deal more than when we used to say it years ago, because there are so many more readers to be merry.

Markets have already taken on holiday manners though we are not yet in holiday week. Wheat is dragging still and futures are a little lower but spot wheat is unchanged. This strength seems warranted and we hope it will hold. Only one wheat ship has gone out since our last report. Barley is quiet and easy but unchanged. Oats are firmly held and offerings are small. Corn is fairly steady. More white than yellow is now arriving and some of it is rather damp. Mill feeds are unchanged. Hay is about the same: a little weaker, perhaps, because of the still better prospects through more rain, but hay dealers have considerable in warehouse and they declare that there will be a better market after the holidays. Beef and mutton are strong at their last advance. Hogs are steady. Butter is lower, receipts are increasing and the demand is complained of somewhat. Cheese is in light supply and firm. Eggs are declining. The poultry market is in better shape, especially for fine young stock. Turkeys are doing moderately this year and there are large supplies of Eastern promised to arrive before Christmas

and the talk is of low prices. Apples are unchanged: choice are selling well and others rather slow. Pears are coming out of cold storage. Oranges are now in the auction house, as described in our Market Review on another page. Lemons are slow and weak. There is nothing doing in dried fruit and little expected until after the holidays. Walnuts are cleaning up well but almonds are slow at present prices. Inquiries for the future are said to be promising. White and Lima beans are strong: colored beans are steady. Fewer potatoes are offering owing to the storms but there are said to be plenty to come. Onions are firm and largely taken before arrival. Wool is slow: there is a little demand for choice bright fall, but other is dull. Hops are very quiet and few sales.

It is interesting to note that something is being done to stop Eastern fruit canners from using California labels on their products. The California Canners' Association have taken the matter up as a menace to their business, and in the United States Court at Baltimore have secured a decree against the firm of W. W. Roberts & Co. of Baltimore, perpetually enjoining them from offering for sale pears and peaches not the product of California in cans or other vessels on which the name of California is affixed. This is a proper action, and it will be of advantage to our growers as well as to the capitalists who have millions invested in our canneries. Evidently these capitalists propose to carry on their business for some time to come, for it is announced that they have entered into a contract with a large number of the pear growers of Anderson valley, Shasta county, representing two-thirds of the total crop, buying their whole product each season for five years at \$20 per ton. It is stated that 90% of the pear growers will sign a similar contract, the price being considered fair and leaving a good margin. The Anderson valley pears are of high canning quality.

Our readers will be pleased to know that if Congress does its part, the Weather Bureau work on this coast will be materially advanced. The Secretary of Agriculture has approved the supplemental estimates of the Chief of the Weather Bureau for a new cable to Tatoosh, new buildings at Neah and Crescent, and other direct improvements to the Pacific coast. It is also proposed to raise the stations at Boston, Galveston and Denver to full forecast stations, such as San Francisco now is. At first glance this may not seem to concern the Pacific coast, but a little thought will make it plain to the fruit growers of this State that the betterment of the Weather Bureau service at any point is ultimately of advantage to the fruit growers of the Pacific slope. In shipping our fruit to eastern markets, the forecast officials at Denver and Galveston will be able to materially aid the shippers, especially in connection with cold waves and heated spells. The new forecast stations will also enable Mr. McAdie to give more time to local problems, both in meteorology and climatology, and this will be an indirect advantage of great value.

There will be a merry time if all the water companies in southern California are sued for the water which they did not furnish during the last three years. One such suit has, however, been begun, wherein the proprietors of the Boston ranch in El Cajon valley have filed suit to recover \$10,000 damages from the San Diego Flume Company for failure to fulfill a contract calling for 15 inches of water. It is claimed that the water supply was cut down at various times up to June, 1898, when it was cut off altogether, causing great injury to trees and vines on the ranch and destroying some of them. The ranch consists of 500 acres of raisin grape vines, 50 acres of orange and lemon trees, 5 acres of alfalfa, 4000 olive trees, besides ornamental trees and shrubbery of various kinds. The ranch owners admit that they have not paid the water rentals, but deny that there is due more than \$3015.72, which is offset by the damages suffered by them.

It is evidently going to be necessary to use all our influence at Washington to resist the onset of foreign fruit dealers to break down the protection under which our leading fruit products are now made possible and profitable.

## QUERIES AND REPLIES.

### Nursery Outlook.

TO THE EDITOR:—I am a young man with some experience in nursery work. Last year I put out 150,000 Thompson's Seedless cuttings to sell. All have been sold and there is a call for more. I now intend to plant very heavily for next year of all kinds of grapes, figs, olives and almonds. Am I right or am I wrong in thinking that this will be the best line of nursery stock for the next two or three years?—OUTLOOK, Sacramento Valley.

We do not undertake to prophesy. We aim to give the facts as they appear from week to week, and each reader must consider them carefully and draw from them his own conclusions as to how he should proceed in the light of them. For this reason we cannot undertake to advise any man as to what he should put in his nursery. We will say, however, that, so far as we can now judge, there will be a good demand for some time for the best resistant vine cuttings, for trees of the true Smyrna fig and the Capri fig, which harbors the fig insect, and for almonds to be planted in safe places. We should do very little indeed with olives. We do not discuss other fruits, as our correspondent does not mention them.

We doubt the wisdom of going into the nursery business on a spurt. Probably there is more lost than gained at it, because the demand changes so rapidly and so much unsalable stock is likely to be had when one simply plants as a sort of a gamble on what will be in special demand. The nursery business requires much patience and persistence and conservative resolution. It should be built up in all good fruit districts cautiously and by those who expect to stay with it and gradually grow into fuller knowledge which comes by experience. Close study of the wants of the fruit trade, the varieties which best meet such wants and at the same time reach high perfection in the locality, etc., will make the local nurseryman the best fruit expert in his district, as he ought to be. By attaining such standing, he will command the respect and patronage of the region. He should carry a general stock, but not fill up his ground with too great a variety, nor do too much with novelties, though always on the alert to keep himself up to date in all things.

### Resistant Vines.

TO THE EDITOR:—I am about to plant a wine vineyard in San Diego county. Can you give me some information about resistant vines, how they may be obtained, at what price and all other information, whether it takes them any longer to bear, if they are suited to southern California, etc.? I have been told that they would not promise so many grapes. We have none in this section and so far as we know have had no trouble with either the Anaheim disease or other diseases.—READER, San Diego county.

A most excellent treatise on resistant vines is found on following pages of this week's PACIFIC RURAL PRESS. Our correspondent seems to be under a little misunderstanding, and, as we know others share it, we will say that the resistant vines which are most talked about do not bear valuable fruit; they are merely planted to secure resistant roots on which the fruiting varieties which are desired may be successfully grafted. There are other resistant varieties which are of value as direct producers, such as those developed by Munson of Texas and which Mr. Pfeffer of Cupertino has had some favorable experience with, but still he is not offering them but rather other varieties for root value only. As all resistant vines are of American origin and all our wine and raisin, and nearly all our table grapes are of the European species, it is clear that grafting must be done. Because of the necessity of grafting it takes longer to get a resistant vineyard into fruit than one in which strong cuttings are planted in place in the vineyard. There is ample evidence that vines on good resistant roots are amply satisfactory in bearing. It is believed that there is no phylloxera in southern California as yet. For this reason we should not introduce resistant vines, for fear of introducing the insect, although probably introducing cuttings suitably disinfected would involve no risk.

### Poisoned Raisins for Gophers.

TO THE EDITOR:—Take a bottle of pulverized strychnine that costs 25 cents and three times as



many raisins as you have gopher holes and a wooden toothpick. Slit all the raisins, then wet the end of the toothpick, insert in the bottle and get on it strychnine to the amount of one-quarter of a grain of wheat. Put this in the raisin, pressing the pulp around the toothpick to clean it of the strychnine. Put two or three raisins in each new gopher hole early in the morning or at night. Repeat until no new holes can be found, which will be but a short time, or until each one gets a raisin.—SOLOMON JEWETT, Bakersfield.

This is not new, but it is better than new—it is true. This method of poisoning gophers is widely practiced throughout the State. There may be some wise old grandfather gophers who know poisoned raisins are bad for the internal workings. Try them with the strychnine on a piece of apple or a carrot, or some other crisp vegetable substance.

#### Cherry Grafting.

TO THE EDITOR:—What month in the year is the best time to graft cherry trees? I have tried grafting them, but I have poor luck. I can graft almost anything else but the cherry.—B. B. G., Mayhews.

Cherries are readily grafted and many old trees have been worked over to secure popular canning varieties. The only difficulty we ever encountered was the excessive sap flow if the grafts were put in at the time when growth was most actively starting, as the grafts seem to be readily drowned. Grafting is more successful when done either before or after the greatest sap pressure; that is, before the buds swell on the stock or after the new growth has started out a little, holding the scions dormant for this late grafting by keeping in moist sand in a cool place. Very successful work has also been done by leaving on some of the branches until growth has started on the grafts. Grafts should usually be placed in the smaller branches above the forks, rather than to attempt working in a large trunk after amputation.

#### Cassava, Pineapples and Dates.

TO THE EDITOR:—What literature or other information have you on the cassava, pineapple and date palm?—W. W. G., Los Angeles.

The cassava has never taken a good hold in California though cuttings have been introduced a number of times. So far as we can judge from experience thus far the plant does not enjoy our dry air. There may have been success with it, but we have not heard of it, and we know of several disappointments. The pineapple is growing in a few places in your part of the State and a few fruits have been marketed. You can find a plantation in the Cahuenga valley near your city. The date has fruited in many places from the Sacramento valley southward. The pineapple and date are discussed in "California Fruits" and the latest achievements described.

#### Brazilian Araucarias.

TO THE EDITOR:—I have succeeded in growing eighteen Brazilian araucarias from twenty seeds sent me from the University last year. Will they do well for street trees along my colony lot? I have forty rods frontage. Would it do to plant the trees two rods apart, or would you alternate them with other trees?—READER, Dos Palos.

The tree is a handsome evergreen and grows to a height of 100 feet in southwestern Brazil. They would do for the street; except that their greatest beauty is had by allowing the branches to extend to the ground, and a large lawn is therefore best for them. They can, however, be trimmed up and still make a good appearance. We would not alternate other trees; a line of one kind of trees is the proper thing. The distance you propose is all right; it will be many years before they interfere.

#### Vine Training—Squares or Rows.

TO THE EDITOR:—Are 4-foot stakes high enough for "Petit Bouschet," or are 5-foot better? Would you recommend planting grapes 6 by 10 feet or 8 by 8 feet?—SUBSCRIBER, Sonoma county.

The Petit Bouschet is a grape which does exceedingly well with short pruning and bears ample crops by that method of pruning. What it will do when trained high, as shown in the picture in our issue of December 15, is interesting but not necessarily a suggestion that it needs high training. As for length of stakes, it would hardly be considered high training with less than a 5-foot stake.

As for distances in the vineyard, planting in rows, that is 6 feet or less with wide distances between the

rows, is practiced with varieties which need long canes like the Thompson's Seedless, etc. So far as we know the method is not practiced except where wiring, trellis-fashion, is undertaken. Eight by eight feet in squares is an average distance: vines are planted in smaller squares on upland or poor soils and in larger squares on rich land where large growth of vine is to be expected. The advantages of ability to cultivate both ways, etc., will probably cause all vines capable of short pruning to be planted in squares rather than in rows.

#### Breaking Up Sandy Land Pasture.

TO THE EDITOR:—I desire to know the best way to break up pasture land for planting to small grain. The land is sandy and has been used for a number of years for stock range. I wish to plow it next month to sow to barley, and want to know how deep to plow it. I have been advised that the earth worms keep the ground below a depth of 3½ inches sufficiently loose for the rising of moisture and the penetration of the roots of the grain. I should like your opinion of the matter.—GRAIN GROWER, Modesto.

It will not be of advantage to plow your sandy land deep if you expect to get a grain crop the coming year. Plow say 4 inches, or deep enough to cover in the green stuff now growing. If the rains are good you will get a fine yield on land that has been idle. The earth worm theory is of no account as explaining why the moisture rises. The holes are better for water to go down and the worms do good in other ways, no doubt. If you should want to plow your sandy land deep, take it on a year when you can summer-fallow it, so that the rains can settle it back into place before you put on your grain. Grain likes a firm seed bed and is destroyed by the drying out of land which is plowed deeply and not worked back to close up the air passages. If you wish to plow deeper and then work by thorough harrowing, it will probably work well if the season is quite wet, but we should prefer to plow shallow, cover in the green stuff, put in the seed and try it that way on sandy land.

#### Seedling or Grafted Nut Trees.

TO THE EDITOR:—I am thinking of planting a good many walnut and chestnut trees. Many tell me that grafted trees will bear much younger and that they make better trees. Is it true?—PLANTER, San Francisco.

Grafted walnut trees bear earlier than seedlings and the product is more uniform, as they do not have the tendency to variation which seedlings have. These considerations have not, however, availed much so far, practically, because not 1% of the bearing trees in the State are grafted. There is, however, a likelihood that in the future more grafted trees will be used, as the advantages of them are being more seriously considered now than ever before in southern California, where almost the whole commercial product is now grown. The same facts hold with the chestnut—except the reference to the southern product. There are hardly enough chestnut trees in California to cast a respectable shadow.

#### Prunes on Almond.

TO THE EDITOR:—Will it do to set out in orchard almond seedlings planted last winter, that were not budded last summer, and graft them into Imperial and Sugar prunes one year later? Do Imperial prunes and Sugar prunes do well on almond roots?—ORCHARDIST, Morgan Hill.

Yes, it will do, but we would rather have straight yearling trees if we could get them at a fair price. If, however, you have the almond seedlings, and can use your own time in grafting over, it may be a good proposition. You will, however, lose a good deal of time and patience before you can get a full stand in the orchard.

#### Birds and Buds.

TO THE EDITOR:—What can be done with the birds which work a little later than this and destroy the buds on the fruit trees?—K. B. N., Fresno.

Some growers rely upon shooting with light charge and small shot. If the birds are hotly hunted they will forsake the place for a time. Poison is, however, the most available recourse. Using one-eighth ounce of strychnine to three gallons of water is strong enough. Place the poisoned water in shallow tins up out of the reach of fowls or other farm stock. Halved oranges—the cut surface rubbed with strychnine—are put on sharpened twigs high up in the trees, being also a very effective means of poisoning.

#### Red Spider In Vineyards.

TO THE EDITOR:—There is complaint of the injury by red spider in the raisin vineyards. Some say the little whirlwinds which are prevalent in the fall scatter the red spider from one place to another. Is that likely and what can be done for the insect?—K. B. N., Fresno.

It is probably true that the sharp gusts of wind carry red spider considerable distances either on dry leaves or otherwise. The prevention and cure for red spider is sulphuring. Blow or dust the sulphur on the leaves and on the ground on the sunny side of the vine. The insect is killed by the fumes which arise from the sulphur as the hot sun strikes it, consequently it is effective even if it falls on the ground.

### WEATHER AND CROPS.

#### Report of the U. S. Weather Service for Week Ending December 17, 1900.

ALEXANDER MCADIE, Forecast Official and Section Director.

##### SACRAMENTO VALLEY.

The weather has continued cold and foggy, with rain in most sections toward the close of the week. No damaging frosts have been reported. Farmers had resumed plowing and seeding, but this work was again discontinued, owing to the rain. Early sown grain continues in excellent condition, and has made good growth during the week. There is an abundance of green feed throughout the valley, and cattle are in splendid condition. As soon as the weather permits, grain planting will be rushed forward, and it is probable a very large acreage will be sown in all the grain districts. Orange picking and shipping continue.

##### COAST AND BAY SECTIONS.

Cold, foggy weather at the beginning of the week was followed by somewhat higher temperature and rain. In the central and northern portions the rainfall was heavy, and was accompanied by high winds, which caused slight damage to fruit trees, and in some places wrecked buildings and fences. The rain was generally beneficial, especially in the southern counties. Farm work has been temporarily suspended, but will be resumed with increased vigor as soon as weather permits, and farmers are looking forward to a very prosperous season. Early sown grain continues thrifty. Green feed is abundant. Olives and oranges are in good condition.

##### SAN JOAQUIN VALLEY.

Cold and foggy weather has prevailed during most of the week, and light frosts have occurred in some sections. Rain on the 13th and 14th extended to nearly all parts of the valley, and was especially beneficial in the southern counties. In some parts of the northern counties the rainfall was not needed, and has retarded farm work. The storm was accompanied by high winds and hail in some places. Warmer weather would be very beneficial, as the ground is cold and heavy, and not in the best condition for grain planting. Early sown grain is in good condition, but making rather slow growth, and the same may be said of green feed. Orange picking and shipping continue, though retarded by unfavorable conditions.

##### SOUTHERN CALIFORNIA.

Nearly normal temperatures have prevailed during the week. No rain has fallen except in the most northern coast counties. Light frosts have occurred in some localities, but no damage has been done. Plowing and seeding are progressing, and prospects are good for a fair acreage of grain. Early sown grain and pasturage are in good condition, but would be benefited by rain. Citrus fruits are doing well, and in the vicinity of San Diego oranges are ripening more rapidly than usual. Irrigation will be resumed in many places during the coming week unless rain falls.

EUREKA SUMMARY.—Warm weather and frequent rains have been so favorable for vegetable growth that green feed is more plentiful than ever before known at this season of the year. The soil is too wet for plowing.

LOS ANGELES SUMMARY.—Light rain in the northern section freshened vegetation, but growth is slow on account of cool weather. Rain is needed in the south; the top soil is crusting, yet early grain looks well. Orange shipments are slackening.

#### Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Dec. 19, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week. | Total Seasonal Rainfall to Date. | Total Seasonal Rainfall to Same Date Last Year. | Average Seasonal Rainfall to Date. | Minimum Temperature for the Week. | Maximum Temperature for the Week. |
|----------------------|------------------------------|----------------------------------|-------------------------------------------------|------------------------------------|-----------------------------------|-----------------------------------|
| Eureka.....          | 3.06                         | 18.17                            | 25.22                                           | 13.53                              | 46                                | 66                                |
| Red Bluff.....       | 1.77                         | 8.46                             | 9.79                                            | 8.34                               | 42                                | 54                                |
| Sacramento.....      | 1.20                         | 7.90                             | 9.00                                            | 5.93                               | 42                                | 58                                |
| San Francisco.....   | 1.24                         | 7.09                             | 9.67                                            | 7.07                               | 46                                | 60                                |
| Fresno.....          | .32                          | 5.42                             | 4.47                                            | 2.82                               | 36                                | 60                                |
| Independence.....    | .05                          | 2.23                             | 0.33                                            | 1.88                               | 36                                | 58                                |
| San Luis Obispo..... | .06                          | 2.92                             | 1.67                                            | 3.39                               | 34                                | 70                                |
| Los Angeles.....     | .71                          | 6.79                             | 3.35                                            | 5.04                               | 44                                | 76                                |
| San Diego.....       | .10                          | 1.73                             | 1.82                                            | 2.44                               | 48                                | 74                                |
| Yuma.....            | .00                          | .02                              | .58                                             | 1.52                               | 38                                | 74                                |



## THE VINEYARD.

### Phylloxera Resistant Vines for California.

By FREDERIC T. BIOLETTI of the University of California,  
at the Fruit Growers' Convention.

To those of you who are familiar with the widespread damage caused by the phylloxera in nearly all the vine-growing countries of the world, a warning as to the necessity of protecting our vineyards against this pernicious insect is hardly necessary. In some of the vine-growing sections of this State, especially the newer sections, and those which so far have escaped the scourge, however, there is an almost total lack of appreciation of the extent of the danger to which vineyards are exposed from this cause. For the benefit of those, then, who are not familiar with the facts, a brief statement of the nature and history of the insect may be interesting, before discussing the only practical means of defence yet discovered.

**THE INSECT.**—The phylloxera of the vine is a minute insect, barely visible without a magnifying lens, which preys upon the roots and leaves of the vine. It is related to the scales and aphids which are so destructive to many of our cultivated crops. It occurs in several forms, of which the most notable are the gall-making form on the leaves, the root form and the winged form. These forms have been named in accord with their most characteristic functions. The gall form, which lives upon the leaves and usually does the vine little or no harm, is called the "form of multiplication," on account of its extreme fecundity, a single female laying 500 or 600 eggs. As there may be as many as seven generations in a year, and all are females or egg layers, a simple calculation will show that, if all the offspring of this single female lived, she would at the end of the year have million of millions of descendants—a number represented by 1 followed by 18 zeros, but impossible to conceive. Luckily, most of them die of cold, starvation and disease, but enough live to justify the name of "form of multiplication." The winged form is one of the chief agencies of infection of the new and isolated vineyards and is appropriately called the "form of distribution." Lastly, the root form, which is the real destructive agent, to which the death of the vines is due, is called the "form of devastation."

The gall form rarely, if ever, occurs in California, and the winged form is much less abundant than in Europe. This accounts for the comparatively slow spread of the disease here. Multiplication and distribution, however, go on with uncomfortable celerity by the agency of the root form alone. A root insect lays from 100 to 300 eggs, and there are several broods each year, while distribution is effectively accomplished by root insects attached to plants, plows, etc., and by the occasional swarms of winged forms which occur when the weather conditions are favorable.

It is hard to realize the amount of damage of which this small insect is capable. In France 3,000,000 acres of vines, half the total acreage, had been destroyed in 1884, fifteen years after the first introduction. This represented a loss at a moderate estimate of \$500,000,000. The losses in Italy, Austria and the other vine growing countries of Europe have been proportionally great. It is difficult to estimate the number or value of the vines destroyed in California, but probably 50,000 acres with a valuation of \$10,000,000 would not be very wide of the mark. All this loss is confined to the counties north of the 37° parallel, and principally to Sonoma, Napa, Alameda and Santa Clara, though probably no county where vines are grown north of that latitude is exempt. As far as we know at present, phylloxera has not been found south of Santa Cruz and Santa Clara counties in the coast region, nor south of San Joaquin county in the central valley, nor south of El Dorado in the foothills. This is due probably more to imperfect scrutiny on our part than to any dereliction on the part of the insect.

**EXEMPTION NOT TO BE EXPECTED.**—However, the great vineyard district of which Fresno is the center and the whole of southern California seem at present exempt; but there is nothing in the history of the pest which offers any hope that this exemption is at all permanent. On the contrary, the course of its spread in Europe points to the conclusion that every vineyard in California, except those upon resistant roots, is doomed to extinction. Some small and isolated districts may remain unaffected for an indefinite time, but it would contradict all previous experience if such a large area of contiguous vineyards as that of the raisin district of the San Joaquin valley should remain free from the disease. Much may be done towards postponing infection by careful quarantine regulations, if such can be enforced; but any sense of security based on any known climatic, soil or cultural conditions is without any basis in fact. Vines have been killed by phylloxera in the hot dry climate of Algeria, in the rich, deep soils of southern France and in the irrigated vineyards of Malaga.

With these facts in view, it behooves every vine grower to consider seriously what is known of importance regarding methods of defense against this

doughty enemy, whether he desires to plant new vineyards or simply to maintain the one he has. Thousands—nay, tens of thousands—of so-called cures and preventives have been proposed and advocated, but all have been found ineffective, impractical, or of only local applicability with one exception. This exception is the use of American vines as resistant stock.

**SUBMERSION.**—In a very few localities in California where it is possible to cover the vineyards to a depth of 6 inches with water for at least six weeks continuously, the phylloxera may be controlled by submersion. In certain sections of France and Hungary there are soils in which vines are immune from phylloxera on account of their sandy nature. It is a mistake, however, to suppose that all sandy soils are immune. Only those which contain 60% or more of quartz sand are safe from serious attack. Again, a few famous vineyards in France are kept alive in a moribund condition and at great expense by the use of carbon bisulphide, but the profit arises in these cases more from the advertisement that the vineyard still exists than from the actual yield of the vines. With these exceptions, then, which have little or no application in California, the use of resistant stock is our only practical means of defense.

**RESISTANT VINES.**—The phylloxera was introduced into California about twenty-five years ago, probably from Europe, upon cuttings or rooted vines. It was, however, from the United States that the insect was introduced into England and France and thence spread over Europe, for it is a native of the Mississippi valley, where it makes its home upon the leaves and roots of the wild vines indigenous to the region. It occurs in large numbers upon the leaves, and in smaller numbers upon the roots of the various wild species, among others upon the river bank grape, *Vitis riparia*, the summer grape, *Vitis aestivalis*, and the rock grape, *Vitis rupestris*, without injuring them to any perceptible degree. It was a knowledge of this fact that led some of the early investigators to introduce American varieties of grapes derived by selection and by hybridization from the native species, with the idea of replacing the destroyed vineyards with varieties that were more or less immune from attack. All efforts in this direction have so far resulted in failure for two reasons: First, very few of the American varieties will bear sufficiently heavy crops to make their cultivation profitable in Europe, and second, they all produce a wine so different and to European taste so inferior to that of even the poorest varieties of European grapes that they could not be used for the purpose for which grapes are principally grown there. A few varieties were found a little more suitable than the rest which were planted and are still cultivated to a very limited extent. Perhaps the best of these is the Jaquez or Lenoir, well known in California. This attempt to find a "direct bearer," that is, a vine with resistant roots and profitable crop has been almost abandoned for some years and the efforts of practical men have been directed to finding varieties with resistant roots on which to graft the European varieties which produce the grapes and wine which the trade demands. These efforts have been to a great extent successful, but not until after an immense amount of time-consuming and costly experimentation.

**DEGREES OF RESISTANCE.**—The first difficulty encountered was the fact that not all the American varieties were sufficiently resistant. The northern grape, *Vitis labrusca*, for instance, though sufficiently resistant in the north where the phylloxera was unable to cope with the severe cold of winter, quickly succumbed when grown in a milder climate, and especially when weakened by being grafted with a European variety. The native wild grape of California, *Vitis californica*, was also found to be only partially resistant and quickly gave up the ghost when submitted to the triple strain of phylloxera, grafting and the production of heavy crops. Of the fifteen or twenty species of American wild vines which have been tested, practically all have been rejected for various reasons, except three and their varieties. These three species are *Vitis riparia*, *rupestris* and *Vitis Berlandieri*.

The first successful resistant vineyards were established upon *riparia* stock taken from the vines growing wild in Missouri and neighboring States. It was soon found that the *riparia* stock obtained in this way varied very much in character. Sometimes the grafted vines grew vigorously and bore well, but too often the *riparia* stock grew too slowly and was too slender to support a large, vigorous European vine. The growers then, instead of planting *riparia* seed or cuttings obtained in the woods, selected their cuttings from vines grown in the vineyard which had shown exceptional vigor and large growth. In this way several constant types or varieties were established which, while preserving all the power of resisting phylloxera possessed by the wild vines were much better adapted to cultivation and grafting. One of the best of these selected varieties is the *riparia* Gloire de Montpellier, which has been imported and distributed by the Agricultural Experiment Station at Berkeley. If you plant cuttings of this variety you are as sure of getting strong, vigorous vines as you are of getting good raisin grapes if you plant Muscat of Alexandria; while if you plant *riparia* cuttings taken haphazard or of unknown

parentage you will get vines differing more in size and vigor from each other than Mission from Muscat and will find it impossible to obtain the even stand of vigorous vines necessary for the best results. Of the other two species, varieties have been selected and propagated in the same way. Of the *rupestris* we have imported among others the *rupestris* St. George, the Martin and the *rupestris* Mission, which are probably the best obtainable.

**ADAPTATION.**—Another serious difficulty which the early experimenters encountered, and which has not been completely overcome yet, is that of finding resistant stocks suitable to all the various conditions under which the European vine had formerly succeeded. The American vines are much more limited in their range of adaptability, most of them will not grow well in soils containing a large amount of chalk such as those of the champagne district, some require water near the surface, some do not succeed in compact, or clayey, or sandy soils, and so forth. The question of "adaptation" then, as it is called, is one of great importance and for most soils and conditions has been satisfactorily solved. In a general way we may say that for rich, loose, well-drained soils which never become very dry and in regions where the summers are not too hot some variety of *riparia* has been found most generally adapted, while for the dry, gravelly, compact soils and the hotter localities the varieties of *rupestris* have given the most satisfactory results. The *Berlandieri* varieties are used in excessively chalky soils, but will probably not be needed in California. What we lack most now is a variety adapted to heavy clay soils such as our stiff black adobes.

The cause of some of these variations in adaptation is plainly seen on examining a growing plant. A *riparia* vine sends out an abundance of slender roots, the majority of which take an almost horizontal direction through the soil. This habit is thoroughly adapted to the loose, rich soil of river banks, but is fatal to a vine growing on the hot, dry slopes, where many of our California vineyards are placed. A *rupestris* vine, on the contrary, sends down, almost vertically, a few large, strong roots which penetrate deeply and branch out in the lower strata of the soil. This makes them admirably suited to our long, dry summer and sun-baked hillsides. The leaves of the *rupestris* are also well adapted to withstand the scorching effects of the sun by their small size, leathery texture and by their power of closing like a book and presenting their edges to the sun and thus diminishing evaporation. This character is, of course, of little practical value, however, for the advantage it gives them is lost when they are grafted.

**How to Choose a Stock.**—When we have solved these two vital problems of resistance and of adaptability we are by no means at the end of our trouble. It is found in practice that some stock cannot without difficulty be grown from cuttings, while others after grafting, though producing a fine growth of leaves and canes, fail to yield paying crops. Some, on the other hand, are difficult to graft or make imperfect unions with the scion, while others lose their vegetative vigor when grafted and soon become unprofitable. To recapitulate, in choosing a resistant stock we must take into consideration these four vital points:

1. Resistance to phylloxera.
2. Adaptation to soil and climate.
3. Fertility and vigor of grafted vines.
4. Affinity, or completeness and permanence of union with the scion.

Another important, though not vital, point is ease of handling or adaptation to our present methods of cultivation.

Taking all these points into consideration, our experience justifies me, I think, in recommending four varieties of resistant vines for planting in California. There may be, and probably are, other varieties equally good; but as these varieties seem quite satisfactory, there is no use confusing our minds and our vineyards with a multiplicity of useless names. These four varieties are then, considering them seriatim:

1. *Rupestris* St. George: This is the variety most widely adapted to our Californian soils and climate. It is deep-rooted, a large vigorous grower and will withstand greater extremes of moisture and drought than perhaps any other resistant. It grows well in poor gravelly soils, in rich valley soils and has great power of penetration in compact subsoils. Its cuttings root easily and the grafted vines when properly handled bear heavy crops. Its resistance while only sixteen has proved perfectly adequate wherever it has been planted. Its chief defect is its proneness to sucker, which it shares with all varieties of *rupestris*, and the difficulty of grafting it when the vines are more than one year old. Both these defects, however, can be overcome by the method of bench-grafting.

2. *Rupestris* Martin: In the very driest and hottest soils it is probable that this variety will be preferable to the St. George; but though a little more resistant to phylloxera, it has the faults of all the *rupestris* in a greater degree.

3. *Riparia* Gloire de Montpellier: This variety should replace the mixed and nondescript *riparias* wherever *riparias* of any kind may prove to do well, as in the southern parts of Sonoma and Napa. In these and other districts of ample rainfall and within



the moderating influence of the sea the riparia is an excellent stock; but the costly experience of many who planted riparias in the upper parts of these counties should make us very cautious about trying them in the hotter locations.

4. Lenoir: Next to the various varieties of riparia, the Lenoir, or, as the French call it, the Jacquez, has been the most widely planted as a resistant. In many cases it has given perfect and lasting satisfaction, but in others its record is not so good. Its chief merits are that it is easy to graft in the vineyard and may be grafted at any age, and even an indifferent workman runs a fair chance of being able to establish a resistant vineyard by its use. It has given excellent results in deep, moist, rich soils, where it is able to replace the roots destroyed by phylloxera. In poorer or drier soils its lack of resistance soon betrays itself by diminishing vigor and bearing capacity. Without doubt it has an important place in certain soils and is perhaps the greatest resistant to plant for the unskillful, the inexperienced or the hasty. For those who are willing to go slowly, to test and practice a little before attempting wholesale operations, I believe there are few cases in which better results can not be obtained with one of the rupestris or riparia varieties than with Lenoir.

#### METHODS OF ESTABLISHING A RESISTANT VINEYARD.

There seems to be some difference of opinion as to the best method of establishing a vineyard upon resistant roots, and in some quarters a good deal of unnecessary heat has been displayed in the discussion of a question that should be and eventually must be settled on a basis of fact and actual practice. When resistants were first tried in California they were planted out in the vineyard, either as cuttings or as roots and cultivated in the same ways as had proved suitable for ordinary vines. At the end of three or four years, when the stock had attained a thickness of 1, 2 or more inches they were grafted. This method was fairly successful with Lenoir stock when the grafting was not done so low in the ground that the scions were able to send out their own roots. With riparia stock the results were not so good and with rupestris they were uniformly bad. Gradually, as the growers acquired skill and experience, it was found that better results could be obtained by grafting the resistants the first or second year after planting in the vineyard. These results were better in several ways. The stock and scion being both young the union between them was more complete and permanent; the stock being small could recover more easily and heal the wound made in grafting. The improvement due to early grafting was particularly marked with riparia and rupestris stock. That there was still room for improvement requires no proof to those who have seen the ragged results of many attempts at replacing vineyards even within the last six or eight years. Some, after five or six years of vain efforts on the part of the owners, have been abandoned, while many others are a continual source of trouble and expense with very little compensation in the form of crop. Some of the causes of this uneven stand and inferior crops in many of these resistant vineyards have already been pointed out, such as the use of stocks unadapted to the soil and climate and of mixed varieties of resistants. However, perhaps the main cause is the impossibility of insuring a full stand by any form of grafting in the vineyard. When the conditions of soil and of weather are exceptionally favorable, skill and care in grafting and cultivating will sometimes result in a stand of 90% or 95%. When, however, these conditions are less favorable, as is much oftener the case—when the soil is stoney or clayey, or the season too wet or too dry—a much lower percentage of good vines is obtained. It is not uncommon to see 30% or 40% of the grafts fail to grow at all, and of those which grow, many are weak, owing to imperfect unions. Some of the vines may be regrafted the following year, but this necessitates cutting off the stock several inches lower; thus placing the scion so low that it will inevitably send out roots and finally be destroyed by phylloxera.

GRAFTING.—It seems hardly possible to deny, in view of the present state of many resistant vineyards, that the system of vineyard grafting as practiced in California is not altogether satisfactory. We have considered the chief defects of that system—let us see in what way the system of cutting or nursery grafting, which has been advocated lately, promises to remedy these defects. Cutting-grafting or bench grafting is a horticultural operation with which all nurserymen are familiar and have long practiced. It consists in taking a cutting from one plant and grafting it, not on another plant, but upon a cutting from another plant and rooting this compound plant in a nursery. The union between the lower part or stock and the upper part or scion takes place in the nursery, so that when the plant is put out in the vineyard or orchard the perils and uncertainties of grafting are over and it has as good a chance to grow as an ordinary rooted plant of the same kind. The merits of this method of grafting as applied to establishing a vineyard on resistant roots are, among others, the following:

1. Both stock and scion consist of young wood, one year old, and, therefore, the union is more complete and permanent than it can possibly be when old vines are grafted.

2. The scion and stock being small and of equal size there is no large wound to heal and the cut surfaces are all protected from drying out or decay.

3. The conditions most favorable for rooting and the union of the graft can be established in a nursery much more easily than in the field. These conditions are:

(a) A loose, sandy, fairly rich soil. One acre of good nursery soil is sufficient to provide rooted grafts for planting out fifty acres of vineyard a year, and there are few localities or farms where a small piece of ground suitable for this purpose can not be found, and at the worst it is almost always possible to make a small piece of land suitable by fertilization and a few loads of sand.

(b) Proper drainage and irrigation. While an adequate supply of moisture is necessary for old vines as well as for young, grafted vines are particularly susceptible to wide departures from the normal in these respects, and it is much easier to regulate them in a nursery of one acre than in a vineyard of fifty.

(c) Thorough cultivation and close attention to removing the scion roots and the material used for binding, at the proper time. A graft in the vineyard requires just as much care and watchfulness in these respects as in the nursery, while the labor expended on the same number of vines is almost fifty times as great.

4. Grafts made in the vineyard are at the mercy of the weather. A heavy rainstorm soon after grafting will often destroy a large percentage. Cutting-grafts can be kept in a protected sand pile until all the heavy rains are over and then safely planted out in the nursery.

5. When the cutting-grafts, after rooting in nursery, are planted out in the vineyard, only those with strong roots and perfect unions are taken, so that a complete and even stand is obtained the first year.

6. This stand is much more complete than can possibly be obtained by the system of vineyard grafting, even under the most favorable circumstances. In experiments conducted by the Agricultural Experiment Station 99% was obtained in good valley soil and 96% in dry hill soil.

7. The union of every vine can be placed exactly where desired, at or just above the surface of the ground, and all danger of the rooting of the scion avoided.

CUTTING-GRAFTS.—Lastly, let us consider the objections which have been urged against cutting-grafting. The principal are:

1. That vines develop a much more vigorous root system if the cuttings are planted directly in the vineyard, where they are to remain permanently. This is, I think, open to doubt, especially as often, owing to unfavorable soil or weather conditions, the growth during the first year is stunted. It is well known that fruit trees and vines in certain soils do much better if rooted first in a nursery before being planted out.

2. That vineyardists already understand the method of vineyard grafting and do not care to risk making experiments with new methods. This is a valid objection when coming from one of the few who has already established a vineyard successfully by that method, but from the many who have tried this method and failed wholly or partially it has little weight.

3. That cutting-grafting requires too much skilled labor. The truth is that it requires less than vineyard grafting and any handy man can be taught all the skill necessary in a couple of days, and there is the further advantage that one trained grafter, or the proprietor himself, can supervise the work more perfectly.

4. That the method is too expensive. This can be proved only by accurately kept accounts of actual operations and these will, I think, show that even when both methods are successful the advantage is on the side of cutting-grafting.

In the event of failure, the possibility of which it is always well to keep in view, the loss of money and labor expended on an acre of nursery will undoubtedly be less than of that required to plant and cultivate fifty acres of vineyard.

#### Wine Grapes for Santa Clara West Foothills.

TO THE EDITOR:—Will you kindly suggest two or three varieties of wine grapes that are likely to be profitable to grow on adobe soil on foothills back of Mountain View. Also, which stock would be most suitable to graft them on. The acreage to be planted is but five, therefore, I presume the grapes should be of one color. On the same soil as above would the apricot be likely to do any better on the myrobolan than on its own roots?—SUBSCRIBER.

TO THE EDITOR:—From an adobe soil you cannot expect a wine of high quality, and I think your correspondent should look for quantity, rather than quality. He should plant but one variety of grape because so small an area should all be harvested at once, to avoid loss of time. Mataro will ripen in his locality (according to my experience) as well as Carignane, and they are both good bearers on short pruned canes. So is the Zinfandel, but I think the

dealers prefer that wine grown farther north—say Sonoma or Napa. He should plant resistant stocks. The only one of these I have any experience of is the riparia which in my dry soil does no good; has never, I think, borne enough to pay cost of cultivation. I am now renewing my vineyard on Rupestris St. George, but wholly on the advice of others. If it were my case I would root the cuttings in nursery this year and graft them next, and set nine-tenths of those grafted where they are to stand, the other nine-tenths to be returned to nursery to replace such as miss at the end of the season. This last suggestion is, however, a subject of controversy, and every one must decide for himself.—JOHN T. DOYLE, Menlo Park.

We are under obligations to Mr. Doyle for his reply. As to apricot on myrobolan, we would not plant apricots, except for home use, on a soil which required the myrobolan. This root will stand more water and more drouth, and will carry an apricot top; but to grow apricots for sale we would find better apricot land.

## ENTOMOLOGICAL.

### Disinfection as a Precaution Against Phylloxera.

TO THE EDITOR:—Permit me to call attention to some errors of fact in the comments made by Prof. Husmann in your issue of December 1, on your recommendations relative to precautions against the introduction of phylloxera into uninfested regions by means of cuttings.

First, as regards the liability to the carrying of the infection by cuttings: Prof. Husmann connects that danger with the existence of the leaf-inhabiting variety of the insect, and from the fact that this variety is very rare in California because of the scarcity of the varieties of grape vines which it inhabits, he concludes that the danger of infection from this source is infinitesimal, and is a negligible quantity.

But the danger does not, as a matter of fact, arise nearly as much, even in Europe and the east, from the presence of the leaf-phylloxera, as from the winter egg of the root-louse, which is laid on the canes in late summer, or autumn. It is true that the winter egg presupposes the previous existence of the winged form of the insect, which is rare in this State except in wet summers. But the droughts of the last three years should not make us forget the frequent occurrence of summer rains in some localities, and of occasional ones anywhere; so that, as said experience proves, the winged phylloxera cannot, any more than the winter egg, be neglected with impunity.

As to the disinfection of cuttings by means of bisulphide of carbon vapor, which Prof. Husmann believes injures the vitality of the cuttings even under short exposure, it is evident that he has forgotten the demonstration of the contrary made by me as early as 1881, and published in the report of the College of Agriculture for 1882, p. 179. After definitely ascertaining the fact that in a saturated atmosphere of bisulphide vapor (that is, in a closed space containing an excess of the liquid substance), vitality of the egg of the insect is irreparably damaged within less than half an hour, I exposed batches of several hundreds of cuttings each (of Zinfandels) in a close box, with a saucerful of the bisulphide placed inside on top of the cuttings, for one, two, four, six and twelve hours respectively; then put these cuttings in nursery beds as usual, after trimming off the ends about half an inch; this being the extent to which the vapor was shown to have penetrated the cut ends. Of all the batches thus treated over 90% lived; which is about as well as most such plantings yield. There was scarcely a perceptible difference between the cuttings that had been exposed one hour and those which had had longer treatment.

Admitting that the disinfection of cuttings is called for (and the universal consensus of Europe ought to be conclusive on this point), it is certain that the destruction of the vitality of the eggs is much better assured by the vapor, which penetrates into all the finest crevices, than by any dipping into liquid disinfectants, which has been deemed efficacious by so many who considered themselves experts, in the past. Any one who has tried to wet thoroughly the woolly buds of such vines as Palomino, Clairette, Malbeck, and many others, will have found that air bubbles that may protect the minute egg of the phylloxera indefinitely from contact with the fluid, can be detected on almost every cutting. No such protection avails against the bisulphide vapor.

I can therefore but repeat, urgently, to the many now contemplating the planting of resistants in the uninfested districts of the State, that it is wholly unsafe to omit disinfection; and that the most effective mode of killing every vestige of the egg not only of the phylloxera, but of other insects that may be present, is to expose the cuttings to the bisulphide vapor for not less than 45 minutes and preferably more, in a close box, well covered and crevices pasted with paper. Then cut off half an inch at each end of the cuttings, which prevents any further penetration of the vapor.

E. W. HILGARD.



## FRUIT MARKETING.

### Selecting and Handling Fruit for Eastern Shipment.

By FRANK H. BUCK of Vacaville at the Fruit Growers' Convention.

As every fruit grower knows how to handle fruit a little better than his neighbor, any advice on this subject would seem to be superfluous. However, as there are no fixed rules for handling fruit, the subject is open for argument.

**THINNING.**—The first step would be a thorough and judicious thinning of the fruit while growing on the trees in order to have a merchantable quality of fruit, and is the most important; and if the fruit has been properly thinned out, it then requires very little grading or sorting for shipment.

In general, I would say that the most successful fruit growers are those who grow a variety of fruits ripening successively, thus prolonging the season for harvesting as much as possible, requiring less labor to handle a large crop; and, by giving more constant employment, making it much easier to procure competent help. The grower who is in a position to ship East a portion of his crop green, sell a portion to the cannery and dry the balance at home is nearest to being independent.

**SELECTING.**—In selecting fruit for Eastern shipment, experience has taught us that with proper care in picking and packing, and with reasonable service from the transportation companies, we can successfully market, in the Eastern markets, cherries, apricots in limited quantities, peaches, pears, plums, prunes, nectarines of colored varieties and grapes. Exceedingly large fruit is not always profitable, particularly peaches, a medium-sized peach that will pack about sixty to eighty peaches to the box of twenty pounds being most desirable. This also applies to pears, four and five tier pears being most in demand, there being only a limited demand for extra large fruit of these varieties, and simply for show purposes. Of plums and the smaller fruits, the reverse is true, size being a very important factor, the large, showy varieties of plums, prunes, apricots and cherries being most in demand. In selecting fruit for Eastern shipment, the first and most important factor is color. The most showy, high-colored fruit always commands the highest prices.

**PICKING AND PACKING.**—The fruit should be picked about two or three days before being perfectly matured, and while still firm, as it is necessary that it should arrive at the destination with sufficient life to stand reshipment in order to obtain best results. After picking, the fruit should be handled as carefully as possible to avoid bruising, as the bruised piece of fruit always starts the decay. All wormy fruit should be carefully rejected for the same reason.

Anything that tends to give the buyer the idea that extra care has been used in the packing will pay. For this reason the packages should be made of new, clean, white pine shooks and carefully and evenly nailed together by experienced box makers. The sale of really first-class fruit will be injured by being offered in a slovenly made package.

Peaches and pears sell best packed in boxes, peach boxes holding about twenty pounds each and pears in boxes twice the depth holding about forty-five pounds. Each peach or pear should be wrapped in a separate paper and packed tightly by breaking joints until the boxes are full. Apricots, plums, prunes and nectarines are best shipped in crates holding four baskets each; grapes, which are packed solid, should be packed in layers with a fold of paper between. In finishing the top layer or face, each fruit should be packed with the same side up, thus giving a perfectly uniform surface. Cherries are packed in layers in smaller, flat boxes holding about ten pounds each.

**SUCCESSFUL FRUITS.**—Our cherry shipments have proven generally successful and there is a growing demand for them. Apricots have only proven successful to a very limited extent from the earliest districts, not being popular as a fresh fruit in the East. Peaches from California are very popular with the trade East on account of their keeping qualities for reshipment, and will always be in demand. Our pears, plums, prunes and grapes are our staple deciduous fruits for Eastern shipment, as in those varieties we so far excel the Eastern fruit that there is not so much competition as with peaches.

Uniformity of packing is one of the most essential points for success—not only uniform quality of fruit all through the package, but uniformity of packages as well, so that, when a buyer buys a lot of fruit by one sample box, he may find every box alike, as the buyers soon come to know such brands and will pay accordingly. Fruit intended for Eastern shipment should never be handled on anything but spring-wagons and carefully covered to exclude dust. In other words, to make a success of shipping green fruit East, always imagine yourself the buyer and ship what you would buy if you were he, and do not expect the Eastern dealer to be satisfied with what you would not buy.

### Statistics of Eastern Fruit Shipments.

In the address of Capt. H. Weinstock, president of the California Fruit Growers and Shippers' Association,

tion, at the recent Fruit Growers' Convention in this city, the following tables were given, and they should be retained for reference:

TABLE SHOWING DESTINATION AND NUMBER OF CARS SHIPPED TO EACH PLACE IN THE YEARS NAMED.

| Des-<br>tination. | 1895. | 1896. | 1897. | 1898. | 1899. | 1900. |
|-------------------|-------|-------|-------|-------|-------|-------|
| Chicago....       | 1473  | 1007  | 1410  | 1203  | 1060  | 1101  |
| New York....      | 862   | 1055  | 1456  | 1429  | 1694  | 1527  |
| Boston.....       | 279   | 471   | 543   | 536   | 710   | 649   |
| Philadelphia..    | 82    | 90    | 202   | 176   | 339   | 212   |
| Minneapolis..     | 124   | 147   | 180   | 167   | 247   | 302   |
| Baltimore....     | 37    | 5     | 16    | 16    | 67    | 34    |
| Cincinnati....    | 15    | 2     | 20    | 15    | 89    | 35    |
| Kansas City..     | 91    | 81    | 86    | 116   | 165   | 129   |
| Montreal....      | 44    | 81    | 98    | 96    | 128   | 126   |
| New Orleans..     | 75    | 85    | 81    | 62    | 126   | 136   |
| Denver.....       | 148   | 136   | 98    | 229   | 269   | 233   |
| St. Louis....     | 78    | 68    | 59    | 27    | 115   | 79    |
| St. Paul....      | 109   | 91    | 121   | 67    | 125   | 131   |
| Omaha.....        | 176   | 85    | 165   | 156   | 194   | 240   |
| Cleveland....     | 29    | 10    | 37    | 25    | 83    | 63    |
| Pittsburg....     | 26    | 25    | 40    | 47    | 137   | 144   |
| Buffalo.....      | 15    | 7     | 16    | 5     | 34    | 10    |
| Milwaukee....     | 42    | 32    | 52    | 19    | 60    | 68    |
| England.....      | 42    | 58    | 42    | 117   | 192   | 192   |
| Scotland.....     | ...   | ...   | ...   | ...   | 4     | 7     |
| Germany.....      | ...   | ...   | ...   | ...   | 2     | ...   |
| Mexico.....       | ...   | ...   | ...   | 1     | 1     | ...   |
| Minor Points—     |       |       |       |       |       |       |
| Canada.....       | ...   | ...   | ...   | ...   | 52    | 71    |
| U. S.....         | 863   | 532   | 586   | 572   | 1051  | 946   |
| Totals.....       | 4568  | 4052  | 5323  | 5007  | 6869  | 6435  |

TABLE SHOWING THE NUMBER OF EACH VARIETY SHIPPED IN THE SAME YEARS.

| Varieties.                  | 1895. | 1896. | 1897. | 1898. | 1899. | 1900. |
|-----------------------------|-------|-------|-------|-------|-------|-------|
| Pears.....                  | 1187  | 1624  | 1640  | 1595  | 1684  | 2115  |
| Peaches....                 | 1289  | 976   | 1316  | 1103  | 2625  | 1361  |
| Grapes.....                 | 1010  | 712   | 1100  | 734   | 847   | 825   |
| Plums and                   |       |       |       |       |       |       |
| Prunes....                  | 465   | 407   | 742   | 542   | 885   | 1148  |
| Apricots....                | 162   | 172   | 177   | 123   | 90    | 152   |
| Cherries....                | 180   | 88    | 239   | 297   | 85    | 238   |
| Apples.....                 | 105   | 53    | 61    | 596   | 490   | 512   |
| Quinces....                 | 13    | 8     | 24    | 1     | 19    | 10    |
| Nectarines..                | 5     | 2     | 3     | ...   | 2     | ...   |
| Figs.....                   | ...   | 1     | 10    | ...   | ...   | ...   |
| Persimmons..                | ...   | ...   | 2     | 1     | 1     | 3     |
| Mixed.....                  | 152   | 9     | 9     | 15    | 24    | 27    |
| Cars not re-<br>ported..... | ...   | ...   | ...   | ...   | 117   | 33    |
| Totals.....                 | 4568  | 4052  | 5323  | 5007  | 6869  | 6435  |

### Prunes and Prunes.

TO THE EDITOR:—A fruit grower attending these meetings for information relative particularly to the much vexed French prune problem would desire to call attention to two matters which seem to have been overlooked:

First—Will these gentlemen who have addressed these meetings on the very great success of the co-operative movements in the southern part of the State kindly inform us whether there is any discrimination between districts, or whether fruits from all sections of same size and quality, and equally carefully packed, receive the same consideration?

To explain: The Cured Fruit Association engendered much of the opposition it deplores by discriminating between the counties. We in other counties maintain that while certainly conceding that Santa Clara county is pre-eminently the prune county of the State for quantity, do not concede that all the prunes in that county are superior to all the prunes raised in other counties. There are large sections in Santa Clara county planted to prunes which for quality can not be surpassed, but there are also sections in other counties—for instance, the adjoining county, Alameda—which with the same class of soil and subject to the same climatic conditions produce a prune fully its equal in every respect. Again, there are sections in Santa Clara county, as in every other county, planted to prunes where the soil not being adapted to prunes the fruit is of a very inferior quality.

Now, if we in other counties can raise a prune which upon analysis proves to be equally rich in saccharine matter, which is carefully and perfectly cured, why this discrimination?

We can answer to this extent: There is discrimination on the part of orange buyers between the different districts in southern California. The reason why buyers pay more for Santa Clara than other prunes is because they can sell them for more, or because they think them better. When they learn all the facts they may act differently.

**CANNED PRUNES.**—The result of much discussion simply proves the fact that the yield of the French prune in California far exceeds its consumption, and that the principal—probably the only—remedy is in wider distribution. A new method of disposing of a quantity was mentioned yesterday in the manufacture of a new cereal. One great factor in the distribution of this surplus seems to have been quite overlooked by grower and canner, namely, the canning of the fresh fruit. When canned ripe it loses all the characteristics of the dried prune, and there is quite as great a difference between canned Bartlett and dried Bartlett pears. It has two great recommendations: First, one-third less sugar is required

for canning than for Bartlett, peach or apricot; second, the small sizes of prunes which when dried lose so heavily in evaporation as to be almost unsalable remain a fair-sized plum when canned fresh.

Those to whom jars of this canned fruit have been presented have been eager to know the name of this "delicious plum." Eastern visitors have expressed surprise that they searched the markets in vain for this canned fruit, which to their taste was superior to any other plum. Since the French prune has lost its identity and becomes a plum, and as "there is everything in a name," drop the name French prune, and when canned call it the California plum.

Here, too, some facts rule. Cannery put up fruit to fill exact orders or follow what they know about the wishes of buyers. A canner will can what he is pretty sure he can sell. If canned prunes are so desirable, the consumers must be taught the fact. No individual nor firm can afford to can any fruit largely in advance of the public understanding of it. There must be much missionary work done before the French prune will be largely canned.

## THE DAIRY.

### Feeding and Handling Calves.

By C. A. STOWE, at a Dairymen's Meeting in Stockton.

Now that the dairy industry is fairly launched in this great valley, will it not be well for us to look carefully to one of the most important features which will make our dairying a success, namely, the feeding and handling of the calves intended to form our profitable cows in the future—in short, our dairy calves? I make the distinction "dairy calves" because, as we all know, there is a great difference between the dairy calf and the butcher's calf, and if we are to make a success of this dairy business the industry of this great State, we must raise "dairy calves" from "dairy cows." I have heard the question asked many times since the advent of our creameries, "Can you raise your calves on skimmed milk as it comes from the separator?" and have also heard the opinion, "Mine nearly starve to death on it." Now, I believe all that is necessary to insure a good, healthy growth of calves fed on separated milk is to use just good, common horse sense—or, rather, perhaps, cow sense—in feeding them. True, the modern separator does not leave enough butter fat in the milk to talk about, but it must be remembered that this is not absolutely essential to the growth and health of the animal.

Have you not noticed how often young calves—say a week old—will be trying to chew something, especially if they can get around a clothesline full of clothes? Is not this a sign that they want something to eat as well as to drink? Then, by all means, they should have it. Place some hay, or even straw, where they can get it and you will be surprised at the difference it will make in their growth and general appearance.

The main point in rearing calves on separated milk is to start them right and keep them right, paying close attention to their health and condition daily. I have the best success by feeding a moderate quantity three times daily until the calf is from four to six weeks old; after that twice daily until at least six months old. For those intended for the butcher it will be necessary to give a small ration of ground grain daily. I have found ground wheat as cheap and as good as anything. If they get a little potbellied do not worry, for the potbellied calf will make the same style of a cow, and we will find that they are the cows that will keep the balance on the right side of the ledger.

We have all heard the expression of the calf "knocked in the head with a pail of skim milk," and if we would carefully trace the cause I think we would find it was an overdose that did the mischief. Once get a calf out of condition from overfeeding, and you will find you have literally "knocked it in the head with skim milk," and if you ever make a thrifty animal from it you will be in luck. For my part I prefer to hear him bawl a little; it is good for the lungs, and we want good lungs in our dairy cows.

We have most of us seen some of the calves "starving to death on skim milk;" or, if we haven't, we have not far to look—seen them shut up, or more often tied up, in some out-of-the-way corner of the barn, with perhaps 2 or 3 feet of twisted or knotted rope, so that it could hardly turn around, with perhaps two weeks' accumulation of filth underneath it, without a bit of straw or hay to chew, or a ray of sunshine, that most necessary of all things for either animal or vegetable life, a prey to filth and flies, "starving on skimmed milk." And what wouldn't starve? This is not an uncommon way of treating calves. Is it any wonder that many people believe that separated milk is not good for calves?

As regards the handling of calves, we all know how much easier and more satisfactory it is to break to milk a heifer raised by hand than one raised on the cow. Consequently it will pay us to pet our calves, as calves, pet them as yearlings, and pet them each succeeding year until they show their appreciation by repaying us as cows of a quiet, gentle disposition, giving us a fair return for the care and attention we have bestowed upon them.



## Agricultural Review.

### BUTTE.

**PLANTING OLIVE TREES.**—Oroville Register: Hon. J. M. Ward, who has had many years' experience in planting olive and orange trees in this section, and who owns a fine grove of orange trees, calls attention to the manner in which too many plant their trees. He says the holes are too shallow, and the olive does not get its roots down deep enough below the hard crust of top earth. He believes that the holes where an olive tree is set should be at least 5 feet deep. He planted an orange tree in his yard, digging the hole fully 6 feet deep. That tree did not require one-half the irrigation that his other trees did. Some trees were set in holes too shallow, and they have not done nearly so well as other trees set in the same orchard where the holes were dug deep.

**OLIVES WILL PAY.**—Oroville Register: Some growers think that olives will not pay at the prices paid per pound. We are confident that olive growing will be found profitable when the price goes much lower than it is now. If you estimate olives at 2 cents per pound on the trees and only fifty trees to the acre, the owner is realizing \$100 an acre if his trees average 100 pounds each. Good sized trees will bear from 200 to 500 pounds and as they get older the amount will increase. We are sure olives will pay at half a cent a pound in the years to come when the trees are larger and in full bearing.

**ORANGES GOING EAST.**—Sacramento Record-Union: On an average fifteen carloads of oranges are being shipped East each day from the Oroville district. It is estimated that 300 carloads from that section will be marketed in the East before the season closes.

### COLUSA.

**BARLEY HEADING OUT.**—Colusa Sun: W. C. Roberts, has on his ranch near Colusa, barley which is fully headed out. We believe this is the first time such a thing has occurred in this section. The season does not seem to have been favorable to such development and it is difficult to account for.

### CONTRA COSTA.

**ALMOND GROWERS MEET.**—Contra Costa Gazette, Dec. 15: Last week a meeting of the Almond Growers' Association was held at Brentwood. The association was reported to be in a flourishing condition. The following officers were elected: President, Thomas Murphy; vice-president, A. Graves; secretary, R. J. Trembath; executive committee, James O'Hara, W. F. Pearce and William Shafer.

### EL DORADO.

**INCREASED FRUIT ACREAGE.**—El Dorado Republican, Dec. 13: Owing to the farmers having sure sale for their fruit for the next five years, there will be many trees planted this winter in this county. William I. Hartwick informs us that he and his neighbors have already ordered 8000 fruit trees, and the order may be raised to 10,000.

### FRESNO.

**FIG COMBINE.**—Emboldened by the success of the raisin growers' trust, the fig producers of the San Joaquin valley are seriously discussing the project of establishing a similar organization. In 1895 there was but one fig packing concern doing business at Fresno. There are now seven, and the acreage planted in figs is increasing every year.

### GLENN.

**OLIVE CULTURE.**—Willows Journal: An idea seems to prevail that olives thrive on very poor land. Experienced growers of olives all contradict that belief and say the olive is as partial to good soil and intense cultivation as any other tree or fruit. There are thousands of acres of land in the lower mountain sections of Glenn county well adapted to the olive. That land on the north side of the canyons that is covered with poison oak, bay, dogwood, etc., is the very best soil, and up to an elevation of 2500 feet the olive will thrive. Fourteen degrees will kill the trees; twenty-six kills the fruit, but such a temperature was never known except along the creek bottoms where the frost and cold are more common than upon the hills; nearly all the land on the north hillsides is very fertile, and with cultivation will produce both olives and apples to perfection. The number of trees now planted in California will in a few years supply the present demand for olives, but when the eastern folks, who never tasted a ripe pickled olive, once get to using them we will sell all that can be grown on land adapted for the tree.

### LOS ANGELES.

**A COUNTY FARM THAT PAYS.**—River-

side Press: The Los Angeles county poor farm at Downey would seem to be a pretty profitable institution. The orange crop will net the county some \$7000 this year, and the hog ranch \$1000 more. The dairy turns out about \$42 worth of milk per day, and the potato and vegetable crops are something remarkable.

### SAN BERNARDINO.

**GRAIN AND APPLE CROP IN YUCAIPE VALLEY.**—San Bernardino Times-Index, Dec. 14: Arnold Atwood states that there are between 10,000 and 12,000 acres of tillable soil in Yucaipe, and it will soon be all sown to grain if the work is continued in the future as it has been in the past few weeks. Early sown grain is all up and looking fine. Over 280 tons of apples were grown in the Yucaipe valley this season, in addition to cherries, prunes and other fruit. J. E. Wilshire leads the list of apple producers of this section, having had seventy tons this season. Larger yields have been realized in previous years.

**MERCANTILE TRUST COMPANY TAKES CHARGE OF THE CHINO LANDS.**—San Bernardino Daily Sun, Dec. 15: Articles of incorporation have been filed in this county by the Consolidated Abstract & Title Guaranty Company for the Mercantile Trust Company of San Francisco that may have quite a bearing on the future growth and prosperity of this county. The main object of this filing in this county is to take charge of the Chino lands that have been through many vicissitudes since the former owner, Richard Gird, cut up his cattle range and placed it on the market for fruit and beet raising.

**SALES OF ORANGE CROPS.**—San Bernardino Sun. Several Highland orange crops have been sold on the trees for spot cash, notable being that of three acres of seedlings, owned by Randolph Seeley, which were among the oldest trees in the Highland district, the contractor taking them at \$500 an acre, or \$1500 for the three acres. Another sale just reported is that made by S. F. Zombro, whose ten-acre orchard is one of the fine young orchards of Highland, and its crop brought \$350 an acre, or \$3500 for the orchard. This orchard has not been in bearing over three or four years. These prices net the grower not less than \$1 a box for everything. One of the big crops that has been sold is that of D. J. Carpenter, the owner of what is known as the Little ranch. It is estimated that it will make more than 7000 boxes.

### SAN JOAQUIN.

**SCARCITY OF BEEF CATTLE.**—Stockton Mail: "Beef is beef now," remarked a local butcher recently. And he is pretty nearly right. The price of beef cattle has been going up in big jumps the last few weeks until now local butchers are offering 4½ cents a pound for cattle on the hoof and are meeting with refusals. That price means 9 cents dressed. J. K. Wagner, a local butcher, in speaking on the subject, says: "The great difficulty is that there are no cattle to be had. The usual sources of supply are greatly depleted. For instance, I have known at Reno during the winter months as high as 40,000 beef cattle—steers. Now, at that place, which has been regarded for a long time as the headquarters for beef, there are not more than 8000 head of beef cattle. You can't touch a bullock there now for less than 9 cents a pound, and the expense of getting them here is just one-half cent a pound, which includes the \$60 it costs a carload for freight. That is a terribly high price, considering that it is a short haul of only about ten hours. Even at the high prices being offered by local dealers, the cattle owners will not sell. I telegraphed to a man at Atwater and offered him 4½ cents live weight for 600 fat steers, and he wouldn't take it. The scarcity of cattle at Reno is due to the fact that Eastern buyers are coming West for beef. Formerly this was not done, but this year many trainloads of stock have been shipped East from Reno, which, naturally, has the effect of depleting the source of supply of the Pacific coast. Another thing that has caused a scarcity of stock is the shipments to the Philippines."

**GRAIN FIELDS OVERRUN WITH MICE.**—Stockton Mail: "The oldest resident never saw mice more plentiful in certain parts of the county than they are now," said a well-known farmer recently. "Wherever the ground ows—or billy ows, as they are called—have been killed off, there the mice are thick. Out at my place we made a count of the mice killed by a cat in the barn one night for her kittens. There were fifty-nine in the pile. That was one night's killing by one cat—fifty-nine mice and one gopher. Billy ows live on mice and small prey and are consequently of great benefit to the farmer. They are killed off by boys, either because of a wanton desire to shoot something or because of the plumage, which is attractive. I believe it is used as trimming for ladies'

hats, but don't know whether there is any sale for it here. Anyway, the boys kill the billy ows off and the mice multiply. Cranes have also been killed off to a very large extent, and the consequence is an increase in the number of gophers, which are the prey of cranes. Mice practically ruin the volunteer crop where they are numerous. A good deal of hay is raised volunteer. It includes wild oats, wheat, etc. The mice, if there are many of them, overrun the fields and eat up the seed. There is a greater plague of mice now than I ever saw at my place before, and I suppose the same is true wherever the billy ows have been killed off. I don't remember to have seen so many since 1864, when I was living in Alameda county. That year, which was preceded by a dry season, the tule mice—or rats, if you choose to designate them as such—deserted the tules and swarmed over the fields of Contra Costa and Alameda counties, doing immense damage. But the tule rat is fast becoming a thing of the past, with the reclamation of the wild lands west of Stockton."

### SANTA CLARA.

**EXPERIMENTING WITH FLAX.**—San Jose Mercury: The farmers of this valley are showing much interest in the subject of flax culture. Some of them are now procuring seed and will give flax a thorough trial this season. It has been shown that flax can be grown as easily and as cheaply as wheat or barley in soil that is suitable for these cereals, and it is claimed that a market in San Francisco and Chicago at profitable prices is insured for at least a few years to come. The production of flax grown on a considerable scale will tend to benefit farmers, who still continue to grow hay, by reducing the area devoted to the latter and so making it in demand at higher prices than usually prevail. The fear has been expressed by a number of farmers that the threshing will be too expensive, or that it will be impossible to save all the seed. Flax seed is saved as easily as grain, and at no greater expense, except for sieves. A wire flax sieve and a perforated zinc sieve are used, the latter being placed above the former. These sieves can be placed in the ordinary grain thresher, but if the latter is thought to be too cumbersome, smaller threshing machines can be used.

### SANTA CRUZ.

**FRUIT NOTES.**—Watsonville Pajaronian, Dec. 13: Eastern and foreign apple shipments for the past week were 21 cars; for the season, 512 cars.—Recent sales of Pajaro Newtowns in London averaged 8 shillings per box. Fancy Oregons were a shilling better, owing to packing.—There were heavy shipments of Pajaro Newtowns in New York last week awaiting European shipment. Fifteen carloads went out on one liner and twelve on another.—Some apples for Europe have gone out this week, and as the market abroad is improving, there will be a gradual increase in shipments from this point until the supply of Newtowns is exhausted.—It was an unfortunate day when Chinese packers got a chance to work in local packing houses. The Chinese have done more than all other causes to injure California's green fruit trade. They are poor packers, and they do not do square work.

### SONOMA.

**BEET CULTURE.**—Sonoma Index-Tribune, Dec. 13: What is known as the upper Jones ranch, comprising eight thousand acres, has been leased by Senator Jones' manager, Wm. Hamilton, to the beet sugar company of Reclamation. The land is located near Schellville and is admirably adapted to the cultivation of the beet. The entire tract will be planted this season. Last year a large proportion of the Ross ranch at Reclamation was seeded to beets, but the crop was a total failure, owing to the seed being planted too late in the season. This year the beet company will profit by last season's experience and will get their land plowed and seeded much earlier. As it was, however, thousands of tons of beets were shipped from Rose ranch to San Francisco last fall. Beet culture on the reclaimed marsh lands in the lower part of the Sonoma valley is only in its experimental stage and is being watched with a great deal of interest by the owners of unreclaimed lands bordering on Sonoma creek and San Pablo bay. Should the venture prove a financial success, thousands upon thousands of acres of tule lands will be reclaimed and turned into beet farms.

### SISKIYOU.

**BIG PRICE FOR SHEEP.**—Ashland Tidings: What is believed to be the highest price paid for a band of mutton on the Pacific coast within the past ten years was received by Charles E. Sherlock, a local sheepman, this week at Gazelle, Cal. Thirteen hundred one, two and three-year-old

wethers netted him \$4.80 per head last before election Mr. Sherlock disposed of 1500 ewes at \$3.60 per head.

### TEHAMA.

**BIG MONEY FOR SHEEP.**—Red Bluff Sentinel: Sheep have been as good as gold for some time past, but it appears that the top notch has not yet been reached. An idea of the condition of the market can be gained from the fact that C. J. Gooch was begged to accept \$3.25 a head for last spring's lambs. Mr. Gooch declined to accept the offer and asked \$3.50, while his son held for \$4 per head. Stock Buyer Johnson, who made the offer, purchased 800 yearling wethers from G. B. Wilcox for \$5 per head. These are unheard of prices for sheep and it indicates that the coast is pretty well drained of mutton of all ages. Of the 800 head there were about 100 two-year-olds, and the sheep were not shorn last fall. They should each have eleven or twelve pounds of wool by shearing time in the spring, and they are not to be delivered till the middle of January.

**LOOK LIKE ORANGES.**—Red Bluff News, Dec. 13: One of the prettiest clusters of grape fruit imaginable has been on exhibition here. There are six of the fruit, which for all the world looked like monster oranges on one small limb and crowded together as closely as grapes grow. They are each nearly 5 inches in diameter. They were grown at the Walton residence.

### TULARE.

**HEAVY ORANGE CROP.**—Visalia Delta, Dec. 13: Mr. R. Besant, one of Lindsay's heaviest citrus growers, says the crop in that district this season is immense. About \$1.25 per box for oranges will be realized by the growers. This is very much under the price of the preceding year, but, taking into consideration the difference in the crops of the two seasons, there will be no reason for complaint. On account of the heavy fogs of late, the citrus men have been delayed in gathering their oranges. With a week of sunshiny weather, the oranges could all be picked. On account of the excessive fogs which have prevailed of late, orange pickers became discouraged and left the country, and labor at present is pretty scarce.

**HORSES EAT PRUNES.**—Thos. Jacobs of Visalia declares that prunes are worth ten dollars a ton for horse feed; that he has been feeding horses prunes for three seasons; that he prefers to feed his small prunes to horses rather than to sell them at ten dollars a ton; that he considers a ton of prunes worth more as horse feed than a ton of barley that costs \$18 or \$20.

### YUBA.

**MONEY IN BUCKWHEAT.**—Marysville Democrat: There is money in buckwheat at \$1.50 per cental, the lowest price in the last ten years, and it is now bringing \$1.70 @1.80, yet carload after carload is brought from States east of the Rocky mountains and ground at the mill in this city. Twenty-eight and thirty years ago good buckwheat was grown on the bottom land of the Briggs farm, 2 miles south of Yuba City. It is true there was not enough moisture then in the upland to mature the grains successfully, but conditions have changed since then, and there are thousands of acres in this section now suitable for the cultivation of this crop.

### WASHINGTON.

**LOW PRICED WHEAT.**—Wheat is worth only 45 cents a bushel in the warehouses in eastern Washington, although the average wheat raiser thinks it should bring \$1 per bushel. But the scarcity of ships, notwithstanding the high charter rates, is responsible for the extraordinarily low price. There is a prospect of a ship famine, but a car famine is not here, as is said by some, as the transcontinental lines can carry the wheat if proper rates can be made. There are approximately 40,000,000 bushels of wheat to be marketed in Oregon, Washington and Idaho. Of this 7,000,000 bushels belong to last year's crop and 35,000,000 were raised this year.

## Horse Owners! Use

GOMBAULT'S

## Caustic Balsam



A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.



## THE HOME CIRCLE.

Christmas, A. D. 1900.

Full nineteen hundred years, and yet  
Behold how Christmas Christ forget  
Outside of churches! Whore, I pray  
Do men show brotherhood to-day?  
In social life? See class with class  
Contending each to each surpass,  
And hear their biting words of scorn  
For one (like Thoe) more humbly born.  
Then look in business circles,—thoro  
Is conflict in the air.  
Beneath fair smiles hate hides its frown;  
There strong men knock the weaker down,  
And Much goes riding over Less,  
And this is what we call success.  
And then the armies! God what means  
This conquest of the Philippines?—  
This Boer and Briton slaughter, and  
This raid upon far China's land?  
It means that forms have not sufficed  
To teach mankind the law of Christ.  
It means the church has failed to be  
A guide to high humanity.  
It means the great and growing need  
Of something better than a creed  
To lift the human race above  
The mire of greed. Christ's law was Love;  
To live for universal good.  
To make the world one brotherhood.  
This was the purpose and the scope  
Of all his teachings; yet we grope  
Through war and strife, and gloom and  
tears,  
Now, after nineteen hundred years.  
And yet I question not, nor doubt  
But that God's will is working out  
A purpose, glorious and great  
And so trust, and hope, and wait,  
Until love's banner be unfurled  
To civilize the Christian world.

—Ella Wheeler Wilcox, in Dec. Success.

## The Army Chaplain.

He came up-country one day, when  
the hot weather was beginning to take  
charge of the souls of some six hun-  
dred human beings.

He made a quaint figure as he stood  
beside the river steamer, in the cruel,  
blinding heat, waiting for the Burman  
coolies to take his baggage up the  
sandbank to the transport cart. The  
large white sun helmet had a ludicrous  
effect above the thin, freckled face  
and the short body; the loosely fitting  
duck suit seemed only to show up  
more clearly the sloping shoulders  
and narrow chest. Certainly not a  
man to impress one favorably at first  
sight; and it did not take the station  
long to agree that his social qualifica-  
tions were in keeping with his appear-  
ance.

He was the guest of the regiment on  
the night of his arrival, and sat in the  
place of honor on the colonel's right.  
The colonel heaved an obvious sigh of  
relief when he rose and the guest was  
handed over to be entertained by us.

We tried for many nights to make  
something of him, for we were a regi-  
ment with a reputation for giving a  
happy home to strangers within our  
gates, and we felt that for once we  
were turning out a failure.

He was not a success in the pulpit,  
either; his best friends—if he ever  
had any—could not have called him a  
brilliant preacher. The sermons he  
read certainly must have been his own,  
they were so intensely uninteresting.

Tommy Atkins may not have strong  
religious inclinations, but he is very  
much a human being, and once he is  
your friend there are infinite possibi-  
lities. On the strength of a polite but  
forcible hint the padre made a feeble  
attempt to enter into barrack-room  
life. The men bore it more or less  
patiently for a time, but soon began  
to shun him like plague, or sham sleep  
when he caught them in the bun-  
galow.

The hot weather had been worse  
than usual, and had been a sickly sea-  
son; and in the middle of it cholera  
had come to strain tense nerves to  
breaking point. The men, ordinarily,  
so easy to deal with, were getting out  
of hand, and acts of insubordination  
were cropping up daily, which neither  
kindness nor punishment seemed able  
to repress. It eventually culminated  
through the padre.

Private Loxton of C company, had  
been brought before the commanding  
officer, and punished for disorderly

conduct in church. The following Sun-  
day the padre, with culpable want of  
tact, leveled a portion of his sermon  
at the offender, who sat there sullen  
from punishment. Private Loxton  
laughed out loud. There was nothing  
for it but further punishment, and  
Private Loxton went to the already  
well-filled cells. On the day of his  
release, the color-sergeant went with  
troubled countenance to his captain.

"Beg y'r pardon, sir, I don't quite  
like the looks of things in the com-  
pany. There's Loxton and Smithers,  
and Brown, and one or two more, al-  
ways whispering together, and shut-  
ting up when I go near. I treat them  
as tenderly as I can, sir, but it's no  
use; and I think there's mischief brew-  
ing."

Merrall thought for a minute.

"I tell you what, color-sergeant;  
send Loxton round to my bungalow  
with a note this evening, and I'll have  
a quite, friendly chat with him, and  
see what I can do. He used to be a  
decent enough chap."

But Private Loxton had made his  
own arrangements for that evening,  
and had set off, with rifle and ammuni-  
tion, to practice at the range. And  
shortly afterward the padre started  
for a lonely evening stroll in the jungle.

Before he had gone far he heard the  
sound of some one running fast be-  
hind him, and turned round, mildly  
wondering how any one could find en-  
ergy enough to run. Private Dawkins  
saluted, gasping and perspiring.

"The color-sergeant saw you, sir,  
and sent me to say as Private Loxton  
'ave took 'is rifle for the range, but  
'e 'asn't gone to the range, sir. 'E's  
gone somewhere in that bit o' jungle,  
and 'e said 'e was going to do for some  
o' the officers; and 'ed do for you, too.  
I've got to go for the adjutant."

Private Dawkins saluted again, and  
was gone. Even in that sweltering  
heat a cold sweat broke out on the  
padre. He walked off very quickly  
after Private Dawkins; then he  
stopped, hesitated, turned and walked  
back again very slowly to the spot he  
started from; then he stopped again,  
and thought.

To most men comes, sometime,  
their opportunity, and he recognized  
that his had come. Somewhere in the  
belt of the jungle, which seemed so  
much nearer now, a man was waiting  
to go to perdition, body and soul; and  
not only that, but he meant to  
hurry to judgment other souls, no  
better prepared, perhaps, than his  
own. The padre pulled himself to-  
gether with a little shiver; and throw-  
ing back his narrow shoulders, stepped  
out for the jungle as firmly as he  
could. He had always been a sensi-  
tive, ugly duckling, and that was  
sufficient to make his life miserable  
without the girl at home coming into  
it. He remembered with a sense of  
shame, how she had only laughed at  
him, and tried to hide her laughter.  
That was why he was out in Burma,  
and he wondered what she would say  
when she heard he was dead so soon,  
and how he died. He wished, with  
the first feeling of pride he had ever  
known, that she could see him now.

Then his thoughts stopped suddenly,  
for he had pushed aside the first  
branches of the jungle, and—the muz-  
zle of Private Loxton's rifle was point-  
ing at his chest. The padre's very  
breath stopped, and no stone figure  
could be more motionless. Private  
Loxton opened the proceedings with a  
foul-mouthed oath. He had been drink-  
ing to excess, and his bloodshot eyes  
had a wild beast light in them.

"Pray away, you beggar," he said.  
"I've been covering your little body  
for ten minutes, and I'm getting tired  
of it."

"I was afraid you'd have shot me  
before I got here," said the padre,  
simply.

Private Loxton stared at him.  
"What the deuce did you come for  
then?" he said.

The padre saw his opportunity, and  
took it.

"I'll tell you why I came," he said,  
"if you give me five minutes more,  
I'll swear to you I won't move hand  
or foot, and after that I'll stand up  
for you to shoot me how you like. Five

minutes isn't much for a man to ask  
when he's got to die."

"Done!" said Private Loxton,  
grimly, bringing the rifle butt thud-  
ding to the ground.

And the padre began to speak. No  
one will ever know what he said in  
those five minutes, or what Private  
Loxton said; I don't think they quite  
knew themselves. But when, at the  
end, the padre held out his hand,  
Private Loxton took it, and gripped  
it hard.

"You're a first-rate little beggar,  
after all," he said, "and you're a good  
plucked 'un too. Curse me if I'll hurt  
you. Get off home."

He took up the rifle resting against  
the tree, and, with the touch, the mad  
light, which had partially died out  
from his eyes, came into them.

And still the padre stood there.  
His ear had caught the far-off sound of  
wheels, and he knew that Private  
Loxton's prey was drawing near.  
Private Loxton heard it, too.

"Will you go?" he cried, his whole  
body trembling with rage.

"Not unless you come with me,"  
said the padre, quietly.

The muzzle of the rifle touched his  
breast, and a quivering finger was on  
the trigger. The sound of wheels was  
coming very near.

"I don't want to hurt you," snarled  
Private Loxton. Will you go?"

"No," said the padre.

Then he fell at full length into  
the undergrowth, clutching at a  
singled hole in his coat, while the re-  
port still rang in the air, and a thin  
puff of smoke curled up among the  
bamboo branches.

The padre opened his eyes, and  
vaguely and painfully wondered where  
he was. Gradually he began to hear  
and understand.

"We must get his deposition some-  
how, doctor. We've nothing like  
proof enough against Loxton yet. If he  
swears it was an accident."

Then another voice: "When I got  
there, sir, Loxton was kneeling beside  
him, crying. He said he'd shot the  
only man who cared a straw for him.  
And since then he's been dumb."

The padre lay still, and thought, in  
a feeble sort of a way, for what seemed  
hours, while the hushed voices spoke  
beside him.

Then he said, faintly—

"Am I going to die?"

The doctor's voice was very low and  
kind, and strove to be very reassuring,  
but the padre's brain was clear enough  
now to understand that death might  
be very near indeed.

"I think I am strong enough to tell  
you all about it," he murmured. And  
they took down his deposition. There  
was a long silence when he had finished,  
and then a whispered conversation.  
At last a grave voice said:

"It's my duty to tell you, sir, that  
if things go wrong, the odds are you  
may die. Knowing that, will you still  
swear it was an accident?"

"Yes," said the padre, firmly.

And then he fainted.

Private Loxton marched in to the  
orderly room, a prisoner, with head  
erect, and lips compressed, and the  
sullen, scornful look of a man who has  
done his worst, and defies everything  
and everybody.

When the commanding officer had  
finished speaking, Private Loxton  
marched out a free man, his head still  
erect, but with a curious lump in his  
throat, and an unaccustomed mist be-  
fore his eyes. He was man enough  
to know what a lie, told on his deathbed,  
must have meant to the padre, and  
he swore a silent oath that the sac-  
rifice should not be unavailing.

He had a hard part to play in the  
days that followed. Day after day he  
went to the hospital to ask anxiously  
for the news; day by day he came de-  
jectedly away, knowing that the  
padre's life was hanging on a slender  
thread. Then, one day, the padre asked  
to see him. There was not much said  
at the meeting. Private Loxton threw  
himself upon his knees and sobbed con-  
vulsively into the bedclothes, while  
the padre's thin, weak hand rested  
caressingly on the rough, shaking  
hand.

But, from that day forth, Private

Loxton was installed as the padre's  
orderly. No man could have tried  
harder to make amends for his sin; no  
woman could have been more tender  
than the big clumsy man.

And the padre was dragged slowly  
back again to life, and, at last, a  
shadow even of his former puny self,  
was carried to the river steamer on  
the way to England, and the regiment  
knew him no more. And Private Lox-  
ton, with one year still to serve, re-  
mained behind to work out his salva-  
tion.

Later, he left for England, too, a  
time-expired soldier, and still more—a  
man. His destination was a quiet  
country vicarage, and his master, a  
quiet country parson, who, next to his  
wife's love, valued nothing on earth so  
much as the devotion of his man-of-all-  
work. And I think the padre may  
rest assured that though he was ready  
to go into the presence of his Creator  
with a lie upon his lips, his punishment  
will not be a very heavy one.—Harms-  
worth Magazine.

## Catching Cold.

Why it is, asks Dr. Simpson, that peo-  
ple who are most exposed to cold by  
outdoor employment are the people  
least subject to colds? Simply because  
no one catches cold by exposing the  
whole body to cold. Those people catch  
cold who try to coddle themselves and  
keep away from cold. A person more  
easily catches cold when a portion of  
the body is exposed, while the other  
portion is kept warm by artificial heat.  
One is more apt to catch cold sitting  
by a stove in an unventilated room than  
by facing a blizzard in the open air.

Nansen and his men, when in the  
Arctic regions, were exposed to the  
cold of every description, and it is  
stated that they never once suffered  
from colds. But no sooner had they  
returned to their native land than they  
one and all caught severe colds. The  
reason for this is probably because they  
were again warmly housed, and spent a  
portion of their time in unventilated  
rooms, sleeping in stuffy bedrooms.

The more children are coddled to keep  
them from catching cold the more apt  
they are to catch cold. The proper  
course to take is to clothe the children  
warmly, provide good stout shoes, and  
turn them loose in the open air. Let  
them go, rain or shine, cold or warm;  
let them have open air every day. Such  
children are far less liable to catch  
cold. And their bedroom window should  
be open every night, winter and sum-  
mer, in such a way as to avoid a direct  
draft upon them while they are sleeping,  
especially as they may uncover them-  
selves when restless.—Popular Science.

## Correct Living.

In a paper upon apoplexy, read some  
time since by Dr. Lee before the  
American Medical Association at  
Philadelphia, the prevalent over-cloth-  
ing of the body is thus treated: Careful  
experiments with different materials  
and weights used as clothing for the  
human body have established that the  
modern dress of the heavy flannel  
beneath the woollens outside, with addi-  
tional accessories to dress, even in cold  
weather, is in excess of the require-  
ments. Then how much more unnatural  
it is to wear more than is needed in  
mild and warm climates, and such as  
that which includes New York and  
Philadelphia? By dressing the body  
with too much clothing, dangers to  
health are increased and recovery from  
chronic disease retarded. As a plant  
would soon die without its trunk and  
branches freely exposed to air and  
light, so the human body dies gradually,  
though one of the causes is often over-  
looked or attributed to other explana-  
tions. The best lightweight under-  
wear procurable in either silk, cotton  
or linen mesh for the youth and the  
adult, in health or sickness, is indicated  
both in winter and summer. Flannels  
are no longer recommended for scien-  
tific reasons. Then with a correct  
food supply and the use of pure water  
for the drink, freely taken all through  
life, together with right use of covering  
for the body, which will admit of enough



ventilation (seldom found among my patients and the sick generally), with sound medical counsel, places it within the reach of the average individual to avoid a premature fatality. Open air exercise is indispensable to the preservation of health and to the prevention of apoplexy.

### Weddings and Tradition.

The ceremonies and traditions which cluster around the marriage service are numerous, interesting and of ancient origin.

The oldest known love letter in the world is in the British museum. It is a proposal of marriage made to an Egyptian princess, and it was written 3500 years ago. It is in the form of an inscribed brick, and is, therefore, not only the oldest, but also the most substantial love letter in existence.

The first silver wedding dates back to the time of Hugh Capet. Two servants had grown gray in his service, a man and a woman, and what could he give them as a reward? Calling the woman he said:

"Your service is great, greater than this man's, whose service is great enough, for the woman always finds work harder than a man, and, therefore, I will give you a reward. At your age I know none better than a dowry and a husband. The dowry is here—this farm from this time forth belongs to you. If this man, who has worked with you five and twenty years is willing to marry you, then the husband is ready."

"Your majesty," said the old servant, "how is it possible that we should marry, having already silver hairs?"

"Then it shall be a silver wedding," and the king gave the couple silver enough to keep them in plenty. This soon became known all over France, and it became a fashion after twenty-five years of married life to celebrate a silver wedding.

The practice of the wife's assuming the husband's name at marriage is a Roman custom. Julia married to Pompey became Julia of Pompey. In latter times married women signed their names in the same manner, but omitted the "of." In Iceland the opposite has been the custom. There the husband assumes the wife's name.

The word wedding is derived from the wed or security which the Anglo-Saxon bridegroom gave at espousals for the due performance of his contract. This wed was held by trustees, and in addition to it the bridegroom wore an espousal ring. As for the wedding ring, it was first designed by Prometheus,

according to tradition, and fashioned out of adamant and iron by Tubal Cain, and was given by Adam to his son to this end, that he therewith should espouse a wife.

The wedding cake is the remains of a custom whereby a Roman bride held in her left hand three wheat ears, and many centuries later an English bride wore a chaplet of wheat. The bridesmaids threw grains of corn or small bits of cake upon the heads of the newly married and the guests picked up the pieces and ate them. The wedding cake did not come into general use until the last century and was then composed of solid blocks laid together, iced all over, so that when the outer crust was broken over the bride's head the cakes inside fell on the floor and were distributed among the guests. Bridal favors are of Danish origin. The true lover's knot was first designed by Danish hearts and derived its designation from the Danish truelofa—"I plight my troth."

The throwing of the slipper comes from the custom of the father of the bride giving a shoe to the new husband in token of transference of power over her, the bridegroom lightly tapping the bride's head with it.

The best man is a survivor of the band of friends who accompanied the suitor in his wife-winning and kept watch for him over the bride's tribe, while the lover sought the opportunity to carry off his prize. The honeymoon journey is the hurried flight of the husband with his wife to escape the vengeance of the pursuing tribe. The presents given the bridesmaids and ushers are simply a relic of the rough bribery used by the ancient bridegroom among his personal friends so that they would assist in the capture of his chosen bride when the day arrived on which he had determined to carry her off. In the fifteenth century a bride—if one of the aristocracy—often received twenty rings from her relatives and six from the bridegroom—two when he became interested in her, two for the espousal and two when they were married.

### Woman's Suffrage in Ireland.

I cannot refrain from saying something about your American women. There is nothing like them in the world that I have seen. I have been astonished at the intelligent interest they take in public affairs, not only in their own country, but all over the world. Naturally a great many of them have asked me about the results of our Irish local government act of 1898, which gives women equal suffrage with men on all questions of local government and upon every question on which the Irish people vote, except that of sending representatives to the British House of Commons.

Of course I am an advocate of woman suffrage. Why not? The interest that it gives to women in municipal government is in itself an educating force. It is in sympathy with the spirit of the age, which is enlargement and not restriction. What a woman lacks in logic, she supplies in intuition. What she lacks in strength of mind she makes up in finesse and delicacy. Capable, honest and intelligent women, united for the annihilation of wrong, are a tremendous power in politics. In the progress of civilization woman's power and capabilities are becoming more manifest. It is high time that we break away from the barbarism that makes women intellectual inferiors. Are we told that the polling booth is not a fit place for women? Then I say it is the duty of man to make it a fit place for her. The admission that it is not so is in itself a disgrace.

In Dublin, previous to the local government act, we had about 8000 voters, none of whom were women. Now our voters' list is about 45,000, of whom at least 15,000 are women. Their votes have helped secure the election of candidates pledged to social reform. Our elections, since they have been given the power of voting, have been orderly and well conducted.

But the new privileges of women are not confined to the franchise. They

may be elected to the City Councils, rural Councils and Boards of Poor Law Guardians. Mrs. Maurice Dockrell, wife of a Dublin merchant, was elected a Councillor of the district of Blackrock, and on the first meeting of the Council she was unanimously elected deputy chairman. In Templemore, Mrs. Bracken, a graduate of the Royal University of Ireland was elected chairman.

I have yet to learn that either of these women suffered loss of dignity or domesticity from assuming public duties. I am satisfied that the entire community is better because they have done so. For the sake of the many charming women I have met here, I should like to see America take a leaf from our book.—Daniel Tallon, Lord Mayor of Dublin.

### "Nine Ounces of Prevention."

Never go to bed with cold or damp feet.

Never lean with the back upon anything that is cold.

Never take warm drinks and then immediately go out into the cold.

Never omit regular bathing, for, unless the skin is in active condition, the cold with close the pores and favor congestion or other diseases.

After exercise of any kind, never ride in an open carriage or near the window of a train for a moment; it is dangerous to health and even life.

When hoarse, speak as little as possible until the hoarseness is recovered from, else the voice may be permanently lost or difficulties of the throat be produced.

Keep the back, especially between the shoulder blades, well covered; also the chest well protected. In sleeping in a cold room establish the habit of breathing through the nose, and never with the mouth open.

Merely warm the back by the fire, and never continue keeping the back exposed to heat after it has become comfortably warm. To do otherwise is debilitating.

When going from a warm atmosphere to a cooler one, keep the mouth closed, so that the air may be warmed by its passage through the nose ere it reaches the lungs.—Table Talk.

### DOMESTIC ECONOMY.

#### Domestic Hints.

**COFFEE CREAM.**—Warm one pint of milk to blood heat. Dissolve in it one tablespoonful of sugar and a saltspoonful of salt. Flavor with one teaspoonful of coffee extract or one tablespoonful of black or very strong coffee. Remove from the fire and stir in quickly one junket tablet, then pour into a dish suitable for serving and place it on ice until ready to serve. To be eaten with sugar and cream.

**WALLED RASPBERRIES.**—Steam one cupful of rice in three cupfuls of boiling milk. When tender add a teaspoonful of salt. Pile it lightly on a platter, making a border around the edge. Fill the center with a pint of fresh red

raspberries, and sprinkle with two spoonfuls of powdered sugar. Mash all other pint, add it to a half cupful of cream and three tablespoons of powdered sugar. Pour gradually over the rice and serve.

**BAKED TOMATOES.**—To bake tomatoes, wash and dry large round ones, and remove a thin slice from the top of each. Scoop out inside of each, leaving a good wall. Chop this pulp fine, add to it a tablespoonful of melted butter, a teaspoonful of onion juice, a teaspoonful of chopped parsley and a tablespoonful of finely rolled bread crumbs to every six tomatoes. Salt and pepper to taste. Return to the tomato shells, and put on the slices that were removed from the top, place a tiny piece of butter on each, and bake about twenty minutes.

**LEMON CORDIAL.**—Peel six lemons, cutting the rind very thin. Squeeze the fruit in a lemon squeezer, and free the juice from seeds and pulp. Pour over peel and juice two quarts of good whiskey. Add to this two ounces of sweet almonds, one ounce of bitter almonds (shelled, but not blanched), and quarter of a pound of green ginger, well bruised. Let this stand, closely covered, for ten days, stirring it often. At the end of that time strain it, and add to it a syrup made by dissolving two pounds of white sugar in a pint of boiling water. This must be cooled before it is put with the lemon. Mix well, strain and bottle.

"Some editor who has been giving advice to people on how to live to be old, says that one of the main rules to follow is to go away from the table at each meal feeling as if you could eat more."

"Well, say, if that's right every fellow at our boarding house ought to live to be a hundred!"—Cleveland Plain Dealer.



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### SCROFULA

is "bad blood." A little break of the skin becomes a sore; you come to have a good many perhaps. There are other manifestations of scrofula. This is the plain one.

There is a germ to be killed. You kill it with vital force.

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## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Dec. 19, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

|                | Jan.      | May.      |
|----------------|-----------|-----------|
| Wednesday..... | 70% @ 71% | 73% @ 74% |
| Thursday.....  | 71% @ 70% | 74 @ 73%  |
| Friday.....    | 70% @ 70% | 73% @ 73% |
| Saturday.....  | 70% @ 70% | 73% @ 73% |
| Monday.....    | 70 @ 70%  | 72% @ 73% |
| Tuesday.....   | 70% @ 69% | 73% @ 72% |

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

|                | Dec.     | Mar.     |
|----------------|----------|----------|
| Wednesday..... | 5s 10% d | 6s 0% d  |
| Thursday.....  | 5s 11% d | 6s 0% d  |
| Friday.....    | 5s 11 d  | 6s 0% d  |
| Saturday.....  | 5s 10% d | —        |
| Monday.....    | —        | 5s 11% d |
| Tuesday.....   | 6s 0 d   | 6s 0% d  |

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

|                | May, 1901.    | Dec., 1901.   |
|----------------|---------------|---------------|
| Thursday.....  | 1 03% @ 1 04% | 1 09% @ 1 09% |
| Friday.....    | 1 03% @ 1 04% | 1 09% @ —     |
| Saturday.....  | 1 04% @ 1 04% | —             |
| Monday.....    | 1 04 @ 1 04%  | —             |
| Tuesday.....   | 1 03% @ 1 03% | 1 08% @ —     |
| Wednesday..... | 1 03% @ 1 03% | —             |

## WHEAT.

There has been a very quiet market for wheat most of the time since last review, and, as the mid-Winter holiday season is now close at hand, it is not probable that there will be much activity during the next few weeks. The weather part of the time has been wet and stormy, interfering considerably with business, but at the same time doing great benefit to the State and making prospects for coming crop about as good as it is possible to have them at this date. Prices have not fluctuated materially, either in the open or speculative market. Ocean freight rates are easier, not being quotable now over 38s. 9d. for desirable iron ships to Cork, U.K., for orders, with usual option as to final destination. About a month ago as high as 43s. 9d. was realized, indicating a decline of 5 shillings, equivalent to \$1.24 per long ton or fully 5c. per cental. This should have gone to the price of wheat here, but for the fact that it was mostly absorbed by shrinkage of wheat values in Europe, where our surplus has to be marketed. There is still ample room for declines in freights, and, when they do occur, wheat may fare better than it has lately. Market closed quiet with an easy tone. The visible supply of grain in the United States east of the Rocky Mountains was given at 61,062,000 bushels, showing a decrease for week of 412,000 bushels.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

May, 1901, delivery, \$1.04% @ 1.03%.  
December, 1901, delivery, \$1.09% @ 1.08%.  
Wednesday, at regular noon session of Call Board, May, 1901, wheat sold at \$1.03% @ 1.03%; December, 1901, — @ —.

|                                     |                 |
|-------------------------------------|-----------------|
| California Milling.....             | \$1 02% @ 1 07% |
| Cal. No. 1 shipping, alongside..... | 97% @ 1 00      |
| Oregon Valley.....                  | 97% @ 1 00      |
| Washington Blue Stem.....           | 1 00 @ 1 05     |
| Washington Club.....                | 97% @ 1 02%     |
| Off qualities wheat.....            | 92% @ 95        |

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

|                      | 1899-1900.   | 1900-01.       |
|----------------------|--------------|----------------|
| Liv. quotations..... | 6s2d @ —s—d  | 6s2d @ 6s2% d  |
| Freight rates.....   | 35 @ 36% s   | 38% s @ —s     |
| Local market.....    | \$0 95 @ 98% | \$0 96% @ 1 00 |

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

Prices are without improvement, and in the way of trading not much has been accomplished in this center. There was a heavy outward movement, however, largely the result of contracts entered into some time ago. One steamer bound for the Orient took 31,441 barrels, and another steamer carried for same destination 9,260 barrels, making an aggregate of 41,700 barrels, an unusually heavy quantity for one week.

|                                |              |
|--------------------------------|--------------|
| Superfine, lower grades.....   | 32 25 @ 2 40 |
| Superfine, good to choice..... | 2 50 @ 2 75  |
| Country grades, extras.....    | 3 00 @ 3 25  |
| Choice and extra choice.....   | 3 25 @ 3 50  |
| Fancy brands, jobbing.....     | 3 50 @ 3 65  |
| Oregon, Bakers' extra.....     | 2 75 @ 3 15  |
| Washington, Bakers' extra..... | 2 75 @ 3 25  |

## BARLEY.

Trading in this cereal has been of light

volume since date of last report, values remaining at much the same range as then noted, and prospects are not favorable for any very active business during the next few weeks. Buyers are not numerous, the purchasing being mostly on local account, and as a rule only to cover immediate needs, operators not caring to anticipate to any noteworthy extent their future requirements. As for some time preceding, the business transacted was principally in Feed descriptions, the bulk of offerings being of this sort.

|                                 |             |
|---------------------------------|-------------|
| Feed, No. 1 to choice.....      | 75 @ —      |
| Feed, fair to good.....         | 70 @ 72%    |
| Brewing, No. 1 to choice.....   | 80 @ 85     |
| Chevalier, No. 1 to choice..... | 97% @ 1 02% |
| Chevalier, No. 2.....           | 85 @ 90     |
| Chevalier, poor.....            | 70 @ 75     |

## OATS.

While buyers are not taking hold very freely at full current rates, they fail to obtain material concessions, as holders in nearly every instance prefer carrying to selling at any appreciable decline. Offerings are largely Reds and Blacks, and these have been in good request for seed, with sales of desirable qualities in a small way at an advance on quotable rates.

|                               |               |
|-------------------------------|---------------|
| White Oats, fancy feed.....   | 1 37% @ 1 42% |
| White, good to choice.....    | 1 30 @ 1 35   |
| White, poor to fair.....      | 1 20 @ 1 27%  |
| Gray, common to choice.....   | 1 20 @ 1 32%  |
| Milling.....                  | 1 42% @ 1 45  |
| Surprise, good to choice..... | 1 40 @ 1 45   |
| Black Russian.....            | 1 12% @ 1 25  |
| Red.....                      | 1 15 @ 1 32%  |

## CORN.

The general conditions of the market are practically the same as noted in last review. Large White is in better supply, as compared with the demand, than is Large Yellow. Much of the corn now offering is damp, which operates against its advantageous sale. Values for best qualities of Yellow are being well sustained.

|                                      |               |
|--------------------------------------|---------------|
| Large White, good to choice.....     | 1 15 @ 1 20   |
| Large Yellow.....                    | 1 17% @ 1 22% |
| Small Yellow.....                    | 1 40 @ —      |
| Eastern, in bulk (carload lots)..... | 1 10 @ 1 12%  |

## RYE.

The few sales effected are at generally unchanged rates. The market does not show any special firmness.

|                          |          |
|--------------------------|----------|
| Good to choice, new..... | 87% @ 90 |
|--------------------------|----------|

## BUCKWHEAT.

Stocks and offerings are light. For desirable qualities the market is firm at ruling rates.

|                     |             |
|---------------------|-------------|
| Good to choice..... | 1 80 @ 1 85 |
|---------------------|-------------|

## BEANS.

White beans of all descriptions are being offered very sparingly, with market quite firm, and quotable higher than last noted. Limas are also ruling against buyers, under limited supplies at points of production, as also in the East and in this center. Whether values for Whites and Limas may be crowded much higher is considered doubtful, but there is little likelihood of prices receding materially during the balance of the season. Market for colored beans is showing steadiness, with a very fair inquiry at prevailing rates, partly on speculative account. Stocks of colored are largely Pinks and Bayos.

|                                  |             |
|----------------------------------|-------------|
| Pea, fair to good, 100 lbs.....  | 4 00 @ 4 25 |
| Small White, good to choice..... | 4 35 @ 4 50 |
| Lady Washington.....             | 3 50 @ 3 65 |
| Butter.....                      | 4 01 @ 4 50 |
| Pinks.....                       | 2 00 @ 2 25 |
| Bayos, good to choice.....       | 2 50 @ 2 75 |
| Reds.....                        | 3 00 @ 3 25 |
| Red Kidney.....                  | 4 00 @ 4 25 |
| Limas, good to choice.....       | 5 40 @ 5 50 |
| Black-eye Beans.....             | 2 75 @ 3 25 |
| Horse Beans.....                 | 1 75 @ 2 00 |
| Garhanzos, large.....            | 2 00 @ 2 25 |
| Garhanzos, small.....            | 1 25 @ 1 75 |

## DRIED PEAS.

Market remains firm for choice Green at current rates, but that these figures will be greatly exceeded is not probable, as they about cover cost of laying down Eastern in this center. Niles Peas are moving slowly, and market presents an easy tone.

|                             |             |
|-----------------------------|-------------|
| Green Peas, California..... | 2 60 @ 2 75 |
| Niles Peas.....             | 1 85 @ 2 00 |

## WOOL.

There is little doing in this market, which is not unusual for this time of year. About the only inquiry for the past week or two has been for choice Fall, bright and froo, which has commanded full current rates, but there is little of this sort now remaining unplaced. California spring and Oregon wools are offering in fairly liberal quantities, but there is no disposition to crowd them to sale at lower figures than are nominally correct.

|                             | SPRING. |
|-----------------------------|---------|
| Humboldt and Mendocino..... | 16 @ 17 |
| Northern, free.....         | 14 @ 15 |
| Northern, defective.....    | 12 @ 13 |
| Middle Counties, free.....  | 14 @ 15 |

|                                      |         |
|--------------------------------------|---------|
| Middle Counties, defective.....      | 11 @ 13 |
| Southern, 12 mos.....                | 8 @ 10  |
| Southern, free, 7 mos.....           | 9 @ 11  |
| Southern, defective, 7 mos.....      | 8 @ 9   |
| Oregon Valley, fine.....             | 17 @ 18 |
| Oregon Valley, coarse to medium..... | 16 @ 17 |
| Eastern Oregon, choice.....          | 13 @ 15 |
| Eastern Oregon, fair to good.....    | 10 @ 12 |
| Nevada, as to condition.....         | 11 @ 15 |

## FALL.

|                             |         |
|-----------------------------|---------|
| Humboldt and Mendocino..... | 11 @ 13 |
| Middle County.....          | 9 @ 10  |
| San Joaquin.....            | 7 @ 9   |
| San Joaquin Lambs.....      | 8 @ 9   |

## HOPS.

Although the quantity of hops now offered from first hands is of very moderate volume, there are more than can be advantageously placed. Dealers are as a rule well supplied, and are not inclined to do much purchasing at present, especially at full current quotations. Moderate shipments have been lately made to Australia, the last steamer taking about 38,000 lbs.

|                               |          |
|-------------------------------|----------|
| Good to choice 1900 crop..... | 13% @ 16 |
|-------------------------------|----------|

## HAY AND STRAW.

Owing to stormy weather during part of the week, receipts of hay have been rather light in the aggregate, but there was enough to satisfy the demand and quotable rates remained unchanged. It is evident that the market needs careful nursing to keep values in their present position. Very little selling pressure would develop weakness and lower prices.

|                      |              |
|----------------------|--------------|
| Wheat.....           | 9 00 @ 13 50 |
| Wheat and Oat.....   | 9 00 @ 12 50 |
| Oat.....             | 8 00 @ 12 00 |
| Barley.....          | 7 00 @ 9 50  |
| Volunteer.....       | 6 00 @ 8 00  |
| Alfalfa.....         | 8 00 @ 9 50  |
| Stock.....           | 5 50 @ 7 00  |
| Compressed.....      | 9 00 @ 13 00 |
| Straw, 3/4 bale..... | 37% @ 47%    |

## MILLSTUFFS.

No changes of importance have occurred in quotable rates of millstuffs of any description during the current week. Most kinds were in fairly liberal supply, with the demand of a rather light order, and the general tendency of the market was to easier figures.

|                     |               |
|---------------------|---------------|
| Bran, 3/4 ton.....  | 13 50 @ 14 50 |
| Middlings.....      | 16 50 @ 19 00 |
| Shorts, Oregon..... | 14 00 @ 15 50 |
| Barley, Rolled..... | 16 50 @ 17 00 |
| Cornmeal.....       | 26 00 @ —     |
| Cracked Corn.....   | 27 00 @ —     |

## SEEDS.

Light quantities of Mustard seed have lately come forward, but they had been mostly previously placed, leaving the market practically bare of offerings and nothing upon which to base quotations. Alfalfa seed is without quotable change, but should there be a fair average demand during the next few months, values will be apt to advance. Bird seed is moving slowly at rates previously quoted.

|                          | Per ctt.    |
|--------------------------|-------------|
| Mustard, Trieste.....    | — @ —       |
| Mustard, Yellow.....     | — @ —       |
| Flax.....                | 2 50 @ 3 00 |
| Alfalfa, Utah.....       | 9 @ 9%      |
| Alfalfa, California..... | 8 @ 8%      |
|                          | Per lb.     |
| Canary.....              | 3% @ 4      |
| Rape.....                | 2 @ 2%      |
| Hemp.....                | 3 @ 3%      |

## BAGS AND BAGGING.

Owing to the present good crop prospects, Grain Bag dealers are anticipating a satisfactory market for themselves the coming season. There is some contracting of Calcuttas for forward delivery, mainly at full current figures. Other bags and bagging are held at generally unchanged rates, with no business of consequence to note.

|                                                 |         |
|-------------------------------------------------|---------|
| Calcutta Grain Bags, huyer June-July.....       | 6% @ 6% |
| Calcutta Grain Bags, spot.....                  | 6 @ —   |
| San Francisco Grain Bags, 22x36, spot.....      | 5% @ 6  |
| State Prison Bags in lots of 2000, 3/4 100..... | — @ —   |
| Wool Sacks, 4 lbs.....                          | — @ 32% |
| Wool Sacks, 3 1/2 lbs.....                      | — @ 28% |
| Fleece Twine.....                               | 7% @ —  |
| Gunnies.....                                    | — @ 12% |
| Bean Bags.....                                  | 4% @ 5% |
| Fruit Sacks, cotton.....                        | 6% @ 7% |

## HIDES, PELTS AND TALLOW.

The Hide market is slow and weak. Pelts are dragging at previously quoted prices. Tallow is meeting with moderate custom at quotable unchanged values.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

|                                     | Sound.  | Culls.  |
|-------------------------------------|---------|---------|
| Heavy Steers, over 56 lbs.....      | 10      | 9       |
| Medium Steers, 48 to 56 lbs.....    | 9       | 8       |
| Light Steers, under 48 lbs.....     | 8% 7%   | 7%      |
| Heavy Cow Hides, over 50 lbs.....   | 8% 7%   | 7%      |
| Light Cow Hides, under 50 lbs.....  | 8% 7%   | 7%      |
| Wet Salted Kip.....                 | 9       | 8       |
| Wet Salted Veal.....                | 9       | 8       |
| Wet Salted Calf.....                | 10      | 9       |
| Dry Hides.....                      | 15% 15% | 15%     |
| Dry Kip and Veal, 11 to 16 lbs..... | 15 @ 13 | 15 @ 13 |
| Dry Calf, under 4 lbs.....          | 16      | 13      |

|                                  |             |
|----------------------------------|-------------|
| Salted Horse Hides, large.....   | 2 50 @ —    |
| Salted Horse Hides, medium.....  | 2 00 @ —    |
| Salted Horse Hides, small.....   | 1 00 @ —    |
| Dry Horse Hides, large.....      | 1 75 @ —    |
| Dry Horse Hides, small.....      | 1 00 @ 1 50 |
| Dry Colts' Hides.....            | 50 @ —      |
| Pelts, long wool, 3/4 skin.....  | 75 @ 100    |
| Pelts, medium, 3/4 skin.....     | 60 @ 75     |
| Pelts, short wool, 3/4 skin..... | 30 @ 50     |
| Pelts, shearing, 3/4 skin.....   | 10 @ 25     |
| Deer Skins, best summer.....     | 35 @ —      |
| Deer Skins, good medium.....     | — @ 30      |
| Deer Skins, thin winter.....     | — @ 10      |
| Elk Hides.....                   | 10 @ 12     |
| Tallow, good quality.....        | 4 @ —       |
| Tallow, No. 2.....               | 3 @ 3%      |
| Goat Skins, perfect.....         | 30 @ 37%    |
| Goat Skins, damaged.....         | 10 @ 20     |
| Kid Skins.....                   | 5 @ 10      |

## HONEY.

Stocks of all descriptions are light, and values are being as a rule well maintained at the quoted range. Firmness is naturally most pronounced on light amber and water white honey, the latter being in very scanty supply.

|                              |           |
|------------------------------|-----------|
| Extracted, White Liquid..... | 7% @ 8    |
| Extracted, Light Amber.....  | 6% @ 7%   |
| Extracted, Amber.....        | 5% @ 6%   |
| White Comb, 1 lb frames..... | 13 @ 14   |
| Amber Comb.....              | 11% @ 12% |
| Dark Comb.....               | 8 @ 9     |

## BEESWAX.

Seldom are supplies of this commodity of such slim proportions as at present. Market is favorable to sellers, being firm at the quotations.

|                                    |         |
|------------------------------------|---------|
| Good to choice, light, 3/4 lb..... | 26 @ 28 |
| Dark.....                          | 24 @ 25 |

## LIVE STOCK AND MEATS.

Beef continues in light receipt and market is strong. That the majority of consumers will have to get along with less meat than ordinarily during the next year or two is quite evident. Mutton is commanding firm figures, with offerings very moderate. Veal and Lamb are bringing good prices. Hogs sold to fully as good advantage as for a week or two preceding.

|                                               |         |
|-----------------------------------------------|---------|
| Beef, first quality, dressed, net 3/4 lb..... | 7% @ 8  |
| Beef, second quality.....                     | 7 @ 7%  |
| Beef, third quality.....                      | 6 @ 6%  |
| Mutton—ewes, 8% @ 9c; wethers.....            | 9 @ 9%  |
| Hogs, hard grain fed, medium.....             | 5% @ 5% |
| Hogs, small, fat.....                         | 5% @ 5% |
| Hogs, large, hard.....                        | 5% @ —  |
| Hogs, feeders.....                            | 5 @ 5%  |
| Hogs, country dressed.....                    | 6% @ 7  |
| Veal, small, 3/4 lb.....                      | 8 @ 10  |
| Veal, large, 3/4 lb.....                      | 9 @ —   |
| Lamb 3/4 lb.....                              | 9% @ 10 |

## POULTRY.

The market was not as heavily stocked as earlier in the month, arrivals of Eastern being of more moderate volume. While the market as a whole presented a little better tone, there was no marked improvement in quotable rates for the ordinary run of offerings of old fowls or full grown young stock. Fryers and Broilers were in light receipt and prices for these descriptions favored the producing interest. Eastern Dressed Turkeys were being offered to arrive at 13c @ 15c, as to quantity and quality.

|                                     |             |
|-------------------------------------|-------------|
| Turkeys, live hens, 3/4 lb.....     | 13 @ 14     |
| Turkeys, live gobblers, 3/4 lb..... | 12 @ 13     |
| Turkeys, Dressed, per lb.....       | 14 @ 16     |
| Hens, California, 3/4 dozen.....    | 3 00 @ 4 50 |
| Roosters, old.....                  | 3 50 @ 4 00 |
| Roosters, young (full-grown).....   | 4 00 @ 4 50 |
| Fryers.....                         | 3 75 @ 4 00 |
| Broilers, large.....                | 3 75 @ 4 00 |
| Broilers, small.....                | 3 00 @ 3 50 |
| Ducks, old, 3/4 dozen.....          | 3 00 @ 4 00 |
| Ducks, young, 3/4 dozen.....        | 4 00 @ 5 50 |
| Geese, 3/4 pair.....                | 1 75 @ 2 00 |
| Goslings, 3/4 pair.....             | 1 75 @ 2 00 |
| Pigeons, old, 3/4 dozen.....        | 1 00 @ —    |
| Pigeons, young.....                 | 1 75 @ 2 00 |

## BUTTER.

Supplies of all descriptions of fresh butter showed increase, and the market was lower, with prospects of still easier figures prevailing in the near future. A larger production than last year is looked for in this State the coming season. Packaged and cold storage butter is in fair supply for this date, and market for same presents an easy tone.

|                                           |          |
|-------------------------------------------|----------|
| Creamery, extras, 3/4 lb.....             | 28 @ —   |
| Creamery, firsts.....                     | 27 @ —   |
| Creamery, seconds.....                    | 25 @ —   |
| Dairy, select.....                        | 25 @ —   |
| Dairy, firsts.....                        | 24 @ —   |
| Dairy, seconds.....                       | 21 @ 22% |
| Dairy, soft and weedy.....                | — @ —    |
| Mixed store.....                          | 14 @ 16  |
| Creamery in tubs.....                     | 20 @ 22  |
| Pickled Roll.....                         | 20 @ 21  |
| Firkin, California, choice to select..... | 20 @ 21  |
| Firkin, common to fair.....               | 17 @ 18  |

## CHEESE.

Market is lightly stocked and is decidedly firm, with quotations at a slightly higher range than last noted. That there will be any material weakening in values for several months to come does not now seem probable.

|                                   |          |
|-----------------------------------|----------|
| California, fancy flat, new.....  | 13 @ —   |
| California, good to choice.....   | 12 @ 12% |
| California, fair to good.....     | 11 @ 12  |
| California Cheddar.....           | — @ —    |
| California, "Young Americas"..... | 12 @ 14  |



## EGGS.

While there were no heavy arrivals of fresh eggs, there was a sufficient quantity on the market to cause prices to decline. At the recent comparatively stiff figures current for select domestic, consumers took hold very sparingly and offerings accumulated to some extent. At the decline noted, retailers are not stocking up ahead, anticipating still lower prices immediately after the holidays.

California, select, large, white and fresh. 40 @—  
California, select, irregular color & size. 32½@37½  
California, good to choice store. 30 @34  
Eastern, as to section and grading. 25 @32  
Eastern, cold storage. — @—

## VEGETABLES.

Fresh vegetables were in light receipt and brought as a rule good figures where the quality was desirable. Such changes as were effected in quotations were almost without exception to higher prices. Onion market continues firm. Most of those now coming forward represent purchases made in the interior.

Beans, String, # lb. 7 @ 10  
Beans, Wax, # lb. 8 @ 10  
Beans, Lima, # lb. — @ —  
Cabbage, choice garden, # 100 lbs. 1 @ 1 25  
Cauliflower, # dozen. 50 @ —  
Cucumbers, Bay, # box. 50 @ 75  
Egg Plant, # lb. 5 @ 8  
Garlic, # lb. 3½ @ 5  
Mushrooms, Wild, # lb. 8 @ 12  
Mushrooms, Buttons, # lb. 15½ @ 20  
Onions, Yellow Danver, # cental. 1 75 @ 2 00  
Peas, Sweet, garden, # lb. 5 @ 8  
Peppers, Green Chile, # box. 40 @ 75  
Squash and Pumpkin, # ton. 8 00 @ 12 00  
Rhubarb, # lb. 5 @ 6  
Tomatoes, # box. 75 @ 1 25

## POTATOES.

The rainy weather during a portion of the week interfered somewhat with potatoes coming forward, and market in consequence presented temporarily a slightly firmer tone, but there was no material improvement in quotable rates. Large quantities of potatoes are reported still held in the Sacramento river district. Oregon has not yet begun to forward in large quantities. Sweet potatoes were in free supply and went in the main at easy rates.

Burbanks, River, # cental. 30 @ 60  
Burbanks, Petaluma-Tomales. 35 @ 60  
Burbanks, Salinas, # cental. 85 @ 1 15  
Burbanks, Oregon, # cental. 55 @ 90  
Sweet Potatoes, Yellow, # cental. 40 @ 90

## The Fruit Market.

## FRESH FRUITS.

The Apple market is quite well stocked with common to medium qualities, and there is a fair supply of choice to select. Only for best stock does the market show any firmness. Quotable rates continued about as last noted. Pears did not make much of a showing, and especially were large and sound Winter Nells difficult to obtain in wholesale quantity, this sort selling to good advantage. Persimmons were in fair supply, with demand only moderate and prices without material change. Berries were practically out of market.

Apples, fancy, 4-tier box. 1 25 @ 1 50  
Apples, good to choice, # 50-lb box. 65 @ 1 00  
Apples, common to fair, # 50-lb box. 25 @ 50  
Apples, Lady, # box. 1 25 @ 3 00  
Grapes, Verdel, # box. — @ —  
Raspberries, # chest. — @ —  
Pears, Winter Nells, # box. 60 @ 1 25  
Pears, common kinds, # box. 40 @ 75  
Persimmons, # box. 40 @ 65  
Strawberries, Longworth, # chest. — @ —  
Strawberries, Large, # chest. — @ —

## DRIED FRUITS.

There is little new or worthy of special mention in the market for cured and evaporated fruits. Trade continues exceedingly slow and is mostly of a small jobbing character from second hands. A few cars of assorted fruit have gone outward, and some orders have been booked to be filled after the opening of the new year, the general desire of dealers being to avoid for the present carrying large supplies of dried fruit of any sort. Apples have been meeting with a little more attention than for some time past, but quotable rates remain without improvement. Quotable values throughout the entire list of dried fruits continue practically as last noted, but are largely nominal and are based mainly on the views of holders or on asking figures. Under selling pressure, full prices cannot be realized. It is altogether probable that the existing inactivity will continue for some weeks. It is not generally anticipated that there will be any marked revival of business in dried fruits before dealers find it necessary to stock up for the spring trade.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime. 6½ @ 7  
Apricots, Royal, choice, in sacks, # lb. 7½ @ 8  
Apricots, Royal, fancy. 9 @ —  
Apricots, Moorpark. 9½ @ 11½

Apples, in 50-lb boxes, rings, pressed, fancy. 5¼ @ 5½  
Apples, 50-lb boxes, rings, pressed, good to choice. 3½ @ 4½  
Figs, White, fancy pressed. 6 @ 7  
Nectarines, # lb. 4 @ 6  
Peaches, unpeeled, fancy. 6 @ 6½  
Peaches, unpeeled, choice. 5 @ 5½  
Peaches, peeled, in boxes. 11 @ 14  
Pears, unpeeled Bartlett's, halved, fancy. 5 @ 6  
Pears, halved, unpeeled Bartlett's. 3½ @ 4½  
Pears, quartered, unpeeled Bartlett's. 3½ @ 4½  
Plums, Black, pitted. 4 @ 5  
Plums, White and Red. 5 @ 6  
Prunes, Silver. 4½ @ 6

## COMMON SUN-DRIED.

Apples, sliced. 2 @ 3  
Apples, quartered. 2 @ 3  
Figs, Black. 1½ @ 2½  
Figs, White. 2½ @ 3½  
Peaches, unpeeled. 3 @ 5

Prices for 1900 crop Prunes, as named by the California Cured Fruit Association: Santa Clara, four sizes, 3c. per lb.; 40-50s, 7c.; 50-60s, 5¼c.; 60-70s, 3¼c.; 70-80s, 3¼c.; 80-90s, 2¾c.; 90-100s, 2¼c.; 100-120s, 2c., which is the uniform price for this grade; Sonomas, other than smallest, ¼c. less; other districts, ¼c. less, except for smallest; Ruby, ¼c. premium.

## RAISINS.

The movement in the wholesale market is sluggish, dealers as a rule having sufficient stock to tide them over the holidays and not caring to make any immediate purchases. While the market lacks firmness, card rates of the Growers' Association continue as before noted.

## F. O. B. FRESNO DELIVERY.—CARLOAD LOTS.

Imperial Clusters, 6-crown, # 20-lb box. 3 00 @—  
Dehesa Clusters, 5-crown. 2 50 @—  
Fancy Clusters, 4-crown. 2 00 @—  
London Layers, 3-crown, # box. 1 60 @—  
do do 2-crown, # box. 1 50 @—  
(Usual advance for fractions.)

Loose Muscatel, 4-crown standard, # lb. — @ 7  
Loose Muscatel, 3-crown. — @ 6½  
Loose Muscatel, 2-crown standard. — @ 6  
Loose Muscatel, seedless. — @ 6½  
(Above prices for loose raisins are for 50-lb boxes.)

Thompson Seedless.—Bleached fancy, # lb., 12c; choice, 11c; standard, 10c; prime, 9c. Unbleached 7½@9c.

Sultanas.—Bleached fancy, # lb., 10½c; choice, 9½c; standard, 8½c; prime, 8c. Unbleached, 7@8c.

## CITRUS FRUITS.

Auction sales of Oranges have been resumed, and it is the intention to continue them tri-weekly throughout the season. Market was well stocked and a liberal proportion of offerings were of fine quality. The quotable range of values showed no radical changes, but the tendency was to weakness. Lemons were held about as last quoted, but movement was slow and offerings were in excess of immediate needs. Limes were in fair supply and were offered at unchanged rates.

Oranges—Navel, # box. 1 25 @ 2 50  
Valencia, # box. — @ —  
Seedlings, # box. 1 00 @ 1 50  
Tangerines, # box. 75 @ 1 50  
Grape Fruit, # box. 1 25 @ 2 50  
Lemons—California, select, # box. 2 25 @ 2 50  
California, good to choice. 1 50 @ 2 00  
California, common to fair. 75 @ 1 25  
Limes—Mexican, # box. 4 00 @ 4 50  
California, small box. 50 @ 75

## NUTS.

Almond market is quiet and devoid of firmness, sales at full current figures being the exception and difficult to effect in other than a small way. Walnuts are commanding steady rates, market for desirable qualities presenting a healthy tone.

California Almonds, shelled. 23 @ 26  
California Almonds, paper shell, # lb. 12 @ 14  
California Almonds, soft shell. 10 @ 12  
California Almonds, hard shell. 6 @ 7  
Walnuts, White, soft shell. 8½ @ 10½  
Walnuts, White, California, standard. 7½ @ 10  
Chestnuts, California Italian. — @ —  
Peanuts, California, fair to prime. 4 @ 5  
Peanuts, Eastern, hand-picked. 5½ @ 6  
Pine Nuts. 5 @ 6

## WINE.

The market shows firmness, with dry wines of 1900 vintage quotable at 15@20c. per gallon, and any changes during the balance of the season are more apt to be to still firmer than to easier figures. The Wine Dealers' Association has materially advanced rates recently for blended stock, their latest quotation on dry wines now being 27½c. per gallon, including cooperage, 23c. per gallon net. On sweet or fortified wines the lowest current quotation of the Wine Dealers' Association is 37½c. per gallon net. It is stated there will be a further advance on March 1st.

## California Dried Fruit at New York.

NEW YORK, Dec. 19.—Evaporated apples, common, 4@4½c; prime wire tray, 4½@5¼c; choice, 5½@6c; fancy, 6½@7c.

California Dried Fruits.—Quiet at unchanged figures.

Prunes, 3½@8½c.  
Apricots, Royal, 11@14c; Moorpark, 15@17c.  
Peaches, unpeeled, 6@9c; peeled, 16@20c.

## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

| FOR THE WEEK.           | Since<br>July 1, 1900. | Same time<br>last year. |
|-------------------------|------------------------|-------------------------|
| Flour, ¼ sacks. 181,847 | 2,963,691              | 2,624,369               |
| Wheat, centals. 268,940 | 3,000,220              | 2,112,560               |
| Barley, centals. 66,213 | 2,294,025              | 3,693,554               |
| Oats, centals. 7,635    | 436,396                | 489,526                 |
| Corn, centals. 6,480    | 55,515                 | 64,285                  |
| Rye, centals. 1,045     | 95,037                 | 81,587                  |
| Beans, sacks. 17,691    | 449,029                | 276,401                 |
| Potatoes, sacks. 49,768 | 789,604                | 628,611                 |
| Onions, sacks. 2,873    | 118,641                | 109,771                 |
| Hay, tons. 3,464        | 92,651                 | 90,570                  |
| Wool, bales. 173        | 21,585                 | 34,857                  |
| Hops, bales. 116        | 5,744                  | 7,099                   |

## EXPORTS BY SEA.

| FOR THE WEEK.             | Since<br>July 1, 1900. | Same time<br>last year. |
|---------------------------|------------------------|-------------------------|
| Flour, ¼ sacks. 36,604    | 1,581,916              | 1,585,447               |
| Wheat, centals. 350,571   | 2,725,383              | 1,752,738               |
| Barley, centals. 21,935   | 1,393,776              | 2,915,437               |
| Oats, centals. 19         | 46,777                 | 23,776                  |
| Corn, centals. 601        | 1,524                  | 8,681                   |
| Beans, sacks. 730         | 7,917                  | 15,998                  |
| Hay, bales. 285           | 79,324                 | 52,446                  |
| Wool, pounds. —           | 233,621                | 3,199,960               |
| Hops, pounds. 37,681      | 404,481                | 556,771                 |
| Honey, cases. 27          | 1,627                  | 3,195                   |
| Potatoes, packages. 1,854 | 51,075                 | 40,190                  |

## List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
PIONEER PATENT SOLICITORS  
FOR PACIFIC COAST.

FOR THE WEEK ENDING DEC. 4, 1900.

663,322.—SAW JOINTER—G. Y. Anderson, Dyea, Alaska.  
663,212.—GRAVEL SEPARATOR—A. Beargeon, Compton, Cal.  
663,007.—GAS GENERATOR—C. M. Bridges, S. F.  
663,064.—BOILER CROWN BAR—E. Clay, Wadsworth, Nev.  
663,014.—CORSET COVER—Kate A. Deering, Fernando, Cal.  
663,068.—DENTAL ELEVATOR—X. Dodel, S. F.  
663,069.—BLEACHING NUTS—D. Farrell, San Jose, Cal.  
663,074.—CUPSIDOR—C. C. Finlayson, Bisbee, Ariz.  
663,335.—BOTTLE—J. A. Foster, Tacoma, Wash.  
662,926.—FURNACE—F. J. Foveaux, Alameda, Cal.  
633,077.—RAILWAY VEHICLE—P. A. Harte, S. F.  
663,170.—BED BOTTOM—J. Hoey, S. F.  
663,171.—BED BOTTOM—J. Hoey, S. F.  
663,277.—LAWN SPRINKLER—L. Horvath, Los Angeles, Cal.  
663,172.—LIFEBOAT—M. P. Hoy, Tacoma, Wash.  
663,173.—VENTILATING BOATS—M. P. Hoy, Tacoma, Wash.  
663,174.—BOAT ANCHOR—M. P. Hoy, Tacoma, Wash.  
663,177.—TWYER—G. B. Klink, Tacoma, Wash.  
663,178.—DENTAL DAM—N. Kuns, Santa Monica, Cal.  
662,948.—BILLIARD GAME—H. H. Lawrence, Oakland, Cal.  
663,349.—BEVEL—R. Leonhart, Jr., Fresno, Cal.  
662,950.—THRESHER—C. A. Long, Pomeroy, Wash.  
663,087.—ENGINE—J. D. McFarland, Jr., S. F.  
663,297.—BICYCLE BRAKE—A. H. Nield, Lovelock, Cal.  
663,301.—GAS GENERATOR—A. F. Shriver, Arbuckle, Cal.  
663,318.—FINGER GUARD BAR—G. T. Willis, Fresno, Cal.

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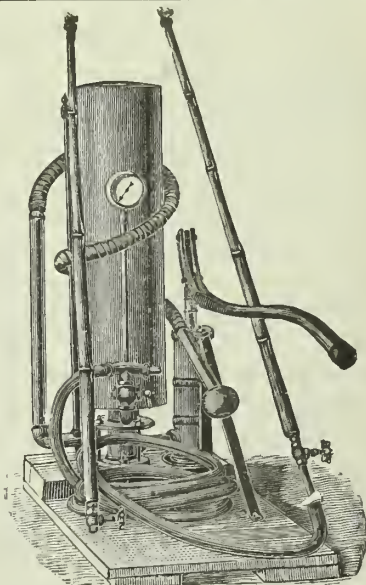
APPENDIX.—Plowing and preparing the soil; Method of using chemical manures. FORMULAE OF MANURES.—Wheat, barley, oats, rye, natural pastures, hemp, rape seed (colza), beets, carrots, cabbages, hops, gardening, potatoes, grape vines, and small trees, turnips, rutabagas, Jerusalem artichokes, sorgo, sugar cane, maize, beans, horse beans, peas, clover, alfalfa, vetches, lucern; Rotation of crops. VOCABULARY OF CHEMICAL MANURES.—Nitrogenized substances: Sulphate of ammonia; Nitrate of soda; Nitrate of potassa; Phosphate of lime; Sulphate of lime. Index.

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Agricultural Products in Alaska.

Professor C. C. Georgeson, special agent of the United States Agricultural Department, in charge of the experimental station at Sitka, recently arrived in Seattle from the North for the purpose of making his annual report to the Government. He has proved that Alaska will ultimately be as promising a field for agriculture and stock raising as it is now for mining. He was sent to the North in May, 1898, and his first work was to ascertain what could be produced there in the way of vegetables. He succeeded in raising choice barley and oats. Speaking of his experiments in Alaska, Professor Georgeson said to-day:

"There is not the slightest doubt that grain can be matured almost anywhere in Alaska. I have this year obtained samples of perfectly ripe barley, oats, wheat and rye from several points in the interior as far north as Eagle. These grains were grown and matured there this year. With one exception they were volunteer products from seed accidentally scattered and grown wild. If grains will grow and mature without culture it stands to reason that they will grow and improve with cultivation. "I also grew flax at Sitka the first year. It attained the height of more than 3 feet, matured seed and produced a fiber of excellent quality. There is no doubt that flax can be made a successful crop in the coast region and reserve lands for experiment stations at suitable places. With this end in view we started a station at Kenai, on the Kenai peninsula on Cook inlet. We made a reservation of 320 acres there, some of which has since been cleared and has matured grain successfully."

### A Salt Trust.

The Federal Salt Company, according to the Chronicle, has acquired complete control of the salt industry in Alameda county and of the entire output west of the Rocky mountains. The headquarters of the company will be located in this city, and one of the first acts was the issuance of a list quoting the price of salt to the trade at about double former rates.

"This should not increase the cost to the consumer," said one of the firm, "for it represents only about one-half the retailers' profits. Heretofore we have made nothing and the retailers have made it all; now we will be in a position to divide with them. Everything will be consolidated and operated by the Federal Salt Company. As that company is subsidiary to the National Salt Company, the salt output of the United States will be controlled, practically, by one management."

The production of salt is one of the

principal industries of Alameda county and the works extend all along the bay shore from Mt. Eden to Newark. The Union Pacific Salt Works, controlling 1100 acres of salt lands in the vicinity of Alvarado, was organized in 1872 and produces about 14,000 tons of salt annually. Fifty men are employed.

### The Southern California Fruit Exchange.

The Southern California Fruit Exchange, says the San Diego Union, has been increased this fall by the organization and admission of fourteen new orange and lemon associations. This astonishing gain is not confined to one locality. A list of the new organizations will show how generally the co-operative movement is spreading. The Co-Operative Orange Association, Riverside; Navel Orange Co., Riverside; Redlands Citrus Association, Redlands; Redlands Fruit Association, Redlands; Highland Orange Growers' Association, Highlands; A. C. G. Lemon Association, Glendora; San Dimas Lemon Association, Escondido Fruit Association, Fallbrook Fruit Association, Nestor Fruit Association, San Diego county; Lamanda Orange & Lemon Association; D. D. Acker Association; The Palms; Alamitos Heights Lemon Association; Lindsay Growers' Association, Lindsay, Tulare county.

No one questions the fact that the exchange will handle a largely increased percentage of the oranges and lemons the present season, but no very accurate estimate is possible before the first of January. Last year out of a total of 17,829 cars of citrus fruit, the exchange handled 6162 cars, or nearly 35% of the output. With an increase of fifteen new associations and no defections, the exchange should have at least 45% to 55% of the fruit.

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### Citrus Exhibit at the Ferry.

There is now in place in the ferry building, at the foot of Market street, an exhibit of citrus fruits which is attracting much attention. It is the Lindsay display, and a local reporter gives this description of it: There is a huge design of a centrifugal pump that stands 17 feet high and is supported by a table 22x12 feet in dimensions. Coupled with the pump is a design of an electric motor, which is also decorated with oranges and lemons. These designs are the central feature of the exhibit, but there is an excellent display of citrus fruits upon the table. Over the whole are the words "Lindsay" and "Tulare County." The fruits used in the decoration of the pump and motor are tangerines, lemons, pomelos and Washington Navels, which are worked into various figures. A few public-spirited men in Tulare county have shared the expense of the installing and maintenance of the exhibit in the ferry building. The design originated with Charles J. Carle of Lindsay and was developed by Mrs. W. T. Simms and S. A. Baggs and wife. When exhibited at the San Joaquin Citrus Fair at Tulare it took first and second prizes over all competitors for "best display of citrus fruits." The display is made possible by the co-operation of the State Board of Harbor Commissioners and the State Board of Trade. There are now 3000 acres planted to citrus fruits

in Tulare county, and the county will ship out of the State this year 600 carloads of citrus fruit.

## THE VETERINARIAN.

### Answers by Dr. Creely.

#### A CASE OF TUBERCULOSIS.

TO THE EDITOR:—I have a cow which while on pasture last summer seemed to lose appetite and became very thin. About that time I noticed she had a kind of dry cough. I then fed her oil meal and middlings with what little hay she would eat, and she improved a little. For a month she has been on fresh pasture, with a little middlings twice a day. Now she is in fair condition, but her cough seems worse. Can you tell me what is the cause, and what to do for the cough?—SUBSCRIBER, Gilroy, Cal.

It is probably a case of consumption, but the tuberculin test should be used for a determination.

#### WART ON LIP OF MULE.

TO THE EDITOR:—I have a two-year-old mule with a large wart growing on the upper lip of the left nostril. In feeding the wart is irritated and bleeds, making an ugly looking sore. A like wart grew on the animal's neck last year. We cut it off and soared the wound. It never returned. Will that be proper treatment for the one on the nose?—STEPH G. NYE, Oakland.

Treat in the same way.

E. J. CREELY, D. V. S.  
510 Golden Gate avenue, S. F.

### Tired Eyes.

Dr. Lofton says there is a peculiar notion that it is much more dangerous to tire the eyes by use than it is to tire any other organ of the body. It is not necessarily injurious to the legs or the arms or the brain to become tired, for proper rest may restore all these to their normal condition. The same is true in regard to the eyes. Proof readers, sewing women and mechanics, who use their eyes for a long time upon near objects, must of necessity weary the muscles that adjust the eye to vision; but if the weariness is compensated for the rest at proper intervals, there will be no harm done to the eyes, for they are so constructed that they can bear maximum fatigue as well as other parts of the body. Education would cease, all mechanical work would soon have an end, if the eyes of school children and of certain kinds of workmen were never tired. Eyes are never overworked, even if they feel very tired when the task is done, if their natural power and freshness return after the proper intervals of rest during the day and sleep at night.

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## Wool Growers' Organizations.

Pursuant to a call made by several growers, a large meeting of wool growers from Tulare, Fresno, Merced and Madera counties was held recently in Fresno, and organized an association known as the Wool Growers' Central California Association.

Jacob Wollner of San Francisco was present and addressed the meeting upon the purposes of the organization.

The following gentlemen were made permanent officers of the association: L. A. Blasingame, president; W. D. Tupper, secretary, and George R. Shipp, treasurer.

The chair appointed a committee on resolutions consisting of Jacob Wollner of San Francisco, Harry Quinn of Kern county and George R. Shipp of Fresno, who reported the following resolution, which was adopted by the association:

"The wool growers of the State of California are urged and requested to organize county wool growers' associations, which shall meet at places designated by the organizers on the third Tuesday, being the 18th day of December, 1900, to effect a county organization and to elect officers and appoint a delegate for each twenty members of such associations to a State convention to be held at the State capitol in Sacramento on the third Tuesday (being the 15th day) of January, 1901, to effect a State organization and transact such other business as may be brought before the convention."

Upon motion the chairman appointed a committee of three consisting of N. P. Justy, E. J. Bullard and George R. Shipp to forward the California representatives in Congress a memorial against any proposed legislation adverse to the interests of the wool growers.

## Broom Corn Crop.

The broom corn crop which Arthur Thornton, the well-known New Hope farmer, experimented with this season proved a success in some particulars, while in others it did not come up to expectations. The corn must be harvested with great care and by experienced help, something that could not be secured this year, and it is believed that it would have proved most profitable had it been cut and cured properly, as the market price was very good. Some of the corn raised by Mr. Thornton brought as high as \$100 a ton. He shipped one lot of forty-seven tons.

The rich soil on his ranch produced a splendid growth of corn, and it was very heavy, but the manner in which it was cut and cured caused considerable of it to be lost, while some of that saved was not up to the standard and did not bring as much as it should. Mr. Thornton carefully watched the yield,

the mistakes made in curing, and should he decide to plant another crop of broom corn he will make an effort to increase the returns. He has not as yet decided to plant corn again, but may do so later. Japs were used to harvest the crop, but white men superintended the work.—Exchange.

## How Foxes Get Rid of Fleas.

By an old hunter and naturalist of local repute a story has been told here confirming as absolutely true and trustworthy the published account, which has had few believers until now, of how foxes rid themselves of fleas. The fox, according to the book narrative, backs slowly into a stream of water with a portion of the pelt of a rabbit in his mouth, after the fox has made a meal of the rabbit. The water drives the fleas first up the fox's legs and then towards his head and finally out on the piece of rabbit fur, and then the fox drops the fur, and his pests are done for. The local hunter and naturalist referred to, strange to say, had never heard or read of this story when he told of the actions of the fox which he observed in the waters of the Patapsco river. The little animal, he stated, backed into the river slowly with so much deliberation that he wondered what it meant. It carried something—he did not know what—in its mouth, and dropped the something when out in deep water. Then the fox hurried away. The object left floated near to the observer, and he hauled it ashore with a stick. Fleas literally swarmed through the object, which was found to be a bit of raw rabbit fur. The observer had a puzzling mystery explained to him. He says his admiration for the shrewdness of the fox grows more and more as he grows older and learns his ways.—Baltimore Sun.

In a small provincial theater a soldier, arriving late, found all the cheaper seats occupied. Seeing, however, a few of the more expensive places vacant, he made towards them.

"Here, where are you going?" called an attendant after him.

"Where am I going?" replied the Tommy, cheerfully. "Where a good soldier should go—to the front of course."

"Look here, sir!" exclaimed the maiden lady, "I want you to take back that parrot you sold me. I find it swears very badly."

"Well, madam," replied the dealer, "it's a very young bird; it'll learn to swear more perfectly when it's bit older."—Philadelphia Press.

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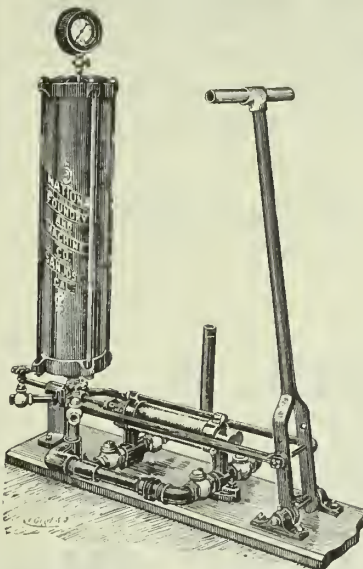
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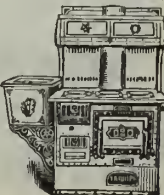
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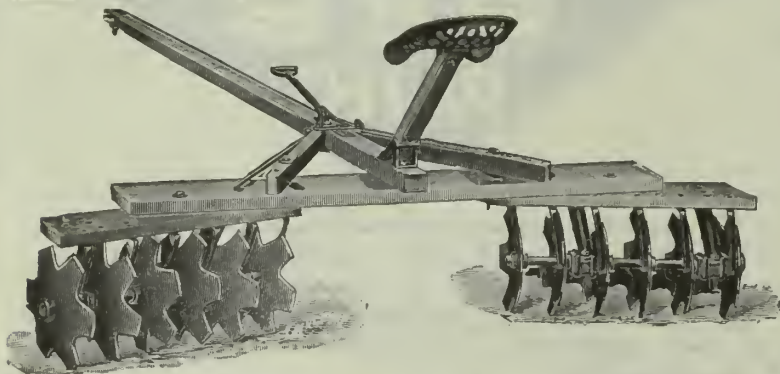
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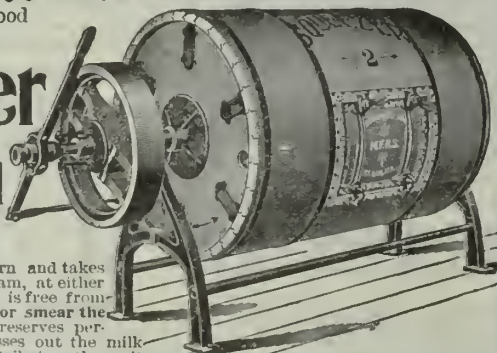
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# THE PACIFIC RURAL PRESS

AND CALIFORNIA FRUIT BULLETIN.

Vol. LX. No. 26.

SAN FRANCISCO, SATURDAY, DECEMBER 29, 1900.

THIRTIETH YEAR.  
Office, 330 Market St.



Dawning of the New Century Through the Golden Gate.

## Close of the Volume.

We come again to the close of another volume of the *PACIFIC RURAL PRESS*. It has been in some respects a most satisfactory volume from an editorial point of view, because of the keen interest and quick responsiveness which readers have manifested in the many timely topics which have arisen for discussion. We are not surprised to learn from the publishers that at no time in the thirty years existence of this paper has its circle of readers been so large as at present. Indeed, the *PACIFIC RURAL PRESS* exemplifies the growth of California's rural population in those regions which, by the energy and enterprise of the residents therein, have earned the right to grow. As an example of this it need but be mentioned that from the one county of Fresno during the months of November and December of this year there have been received the names of over 300 subscribers. These new readers were secured in regular course of business, without resorting to proffer of premiums or other inducements, but solely on the trustworthy character of the paper and its manifest value to everyone connected in any way with the great interests of the commonwealth of which the *PACIFIC RURAL PRESS* has been for so long the exponent.

The close of the volume has a peculiar personal interest to this writer because it marks the completion of the twenty-fifth year of his connection with this publication. It is a matter of satisfaction and thankfulness to him that he has been able to participate in the preparation of every issue of the paper during this term of years. He has never been so far away that he could not reach a hand to it; nor so ill that others had to minister in his place. It is with thanksgiving and not with boastfulness that this statement is made. A quarter of a century of unbroken opportunity to work in promotion of a cause which commands one's fullest interest and enthusiasm, and secures the friendship and respect of those to whom the cause is vital, is a boon which can not be overvalued. That he has enjoyed such an opportunity and has been kept from abusing it is, to him, a matter of sincere thankfulness and rejoicing.

And now the *PACIFIC RURAL PRESS* passes over into the new century with the experience of nearly one-third of the old century to guide its course. It has ambition to lead in the new as it has led in the old. For its chosen work it will show new life, new love to meet the newer day.

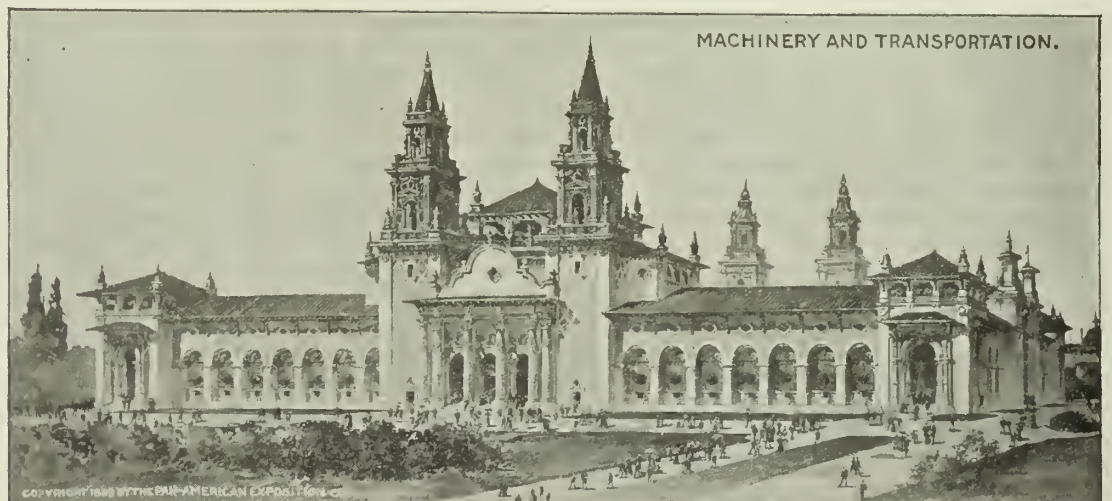
## California at the Pan-American Exposition.

One of the most important outside interests of California at the present time is the approach of the great all-American exposition at Buffalo, New York. We have frequently alluded to this exceptional opportunity to make California and California products better known, and due appreciation of the fact seems to be realized. At the recent fruit growers' convention in this city, as our reports showed, people were quite awake to the chance to earn further recognition for our resources and productions. It was stated that over one-fourth of all the space in the horticultural building was awarded to California, and that it would be occupied in a striking manner. This space will be occupied by two organizations, the Los Angeles Chamber of Commerce for southern California and the State Board of Trade for the balance of the State. The latter organization has just made an official announcement of its plan, which is to undertake the work without asking for a State appropriation. This will strike the people not only as right but as wise, for there is a general impression that State funds appropriated for such displays are not so effective as that provided by individuals and localities. Of course, relinquishing all appeal to the Leg-

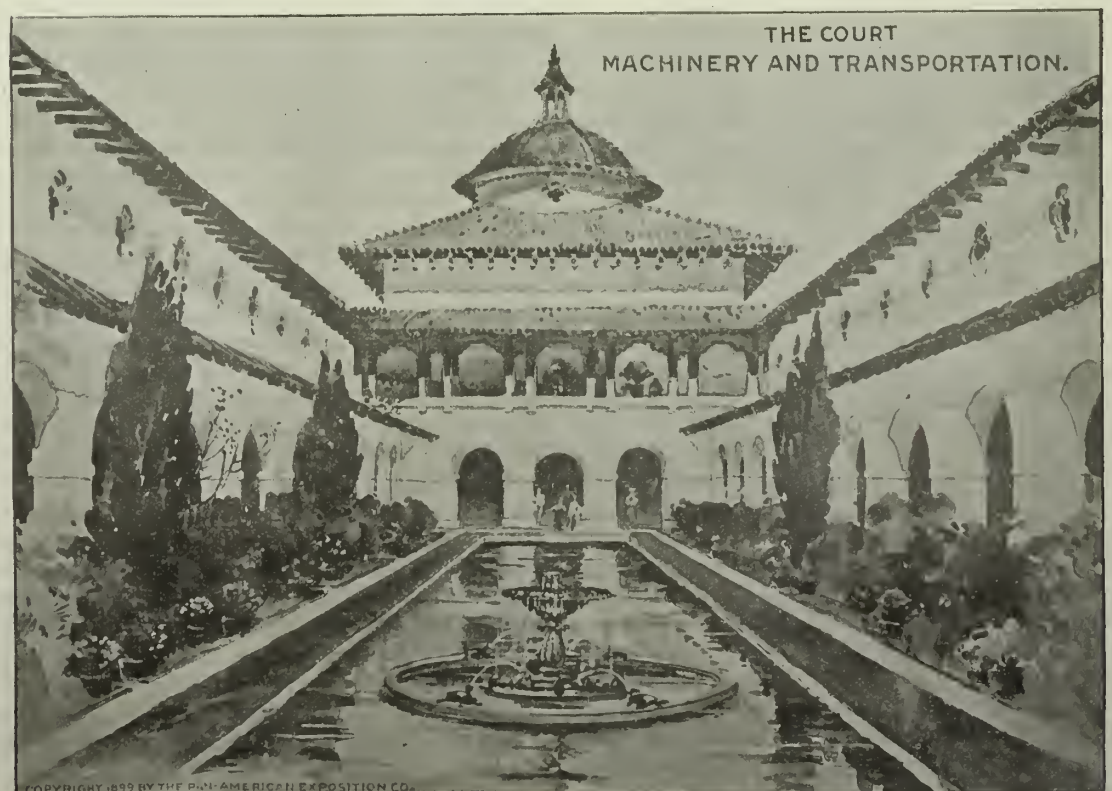
islature strengthens the appeal to counties, localities and enterprising individuals, and we trust it will not be made in vain.

In a circular just issued by General Chipman, president, and J. A. Filcher, secretary, of the State Board of Trade, it is stated that reinforcement is needed, and to that end assistance is solicited from all parts of the State. Contributions which will illustrate every phase of our industrial and social life are desired. It is hoped to make a collective exhibit where California will be displayed in miniature in a way to answer every intelligent inquiry that may arise as to what we are doing and can do, and to adequately portray the advantages California offers to the home seeker of the East and Middle West, thousands of whom desire to come here to reside, if the way is pointed out.

We hope this appeal will command wide attention. On its part the Exposition is doing everything possible to make displays effective. The buildings which we illustrate herewith are supplementary to the more directly agricultural edifice which we have previously shown. We understand that an open winter at the East thus far is enabling the builders to proceed with great satisfaction, and California should be in at the opening in creditable shape.



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E. J. WICKSON.....Horticultural Editor.

San Francisco, December 29, 1900.

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## The Week.

We go to press the day after Christmas with the echoes of the great holiday still lingering in the air. There is just a sign of lassitude in the carriage of those you meet in the marts and along the city streets. It is the reaction from the wonderful activity of the holiday season, which informal reports pronounce the best ever experienced in San Francisco. The present lull will give opportunity for the closing exercises of the business year and is welcome to all concerned. In the country work has advanced rapidly. It has been a good year for it thus far—plenty of moisture for current needs and plenty of clear weather for field work. Plowing and sowing have been pushed and an exceptionally large area is now in. There is great interest in tree and vine planting and other orchard and vineyard work is going forward either in fact or in preparation. It looks as though the coming year would be a busy one and we trust to all our readers a happy one.

It is not alone in commercial circles that looking backward must be undertaken. The Weather Bureau is taking a retrospect and does not undertake to regulate crop conditions between the holidays. For this reason we do not have Mr. McAdie's excellent review in this week's PACIFIC RURAL PRESS. We shall not have another until the next century.

Mid-holiday is not a good time for produce traffic, except for actual needs, and the markets show it. And yet wheat movement has been better than for some time back. Three cargoes of wheat have gone to Europe and two more are about to pass out through the Gate. Considerable wheat, and flour as well, have gone to Chile and Peru by way of the new German line of steamers now plying from this port. Wheat values are no better, but we are glad to see something doing. Lower talk is abundant; but, so far, it gets no wheat. Barley is sluggish and unchanged. Oats are strong and quiet. Corn is steady. There is nothing new in millstuffs, but prices are holding about the same. There is a good deal of bran from the north now on hand here. Hay is unchanged and barely steady; holders in the city are still firm. Beef is quiet at old prices; mutton holds up well and lamb is higher. On the other hand, veal is cheaper—depressed, they say, by cheap turkeys, which would convey the idea that turkey patties are sometimes made of veal. Hogs are bringing good figures—once in a while something goes above quotations. Butter is quiet and weak especially for anything below the top notch. Cold storage butter is still in evidence. Cheese is in light stock and prices stiff, but no advance. Eggs are declining, but may hold well for a time yet, though both fresh and stored eastern eggs are pressing hard. Califor-

nia turkeys are doing better and receipts light, but the crush of storage and eastern turkeys forced the price quite low. Other poultry has a firm tone and is doing a little better than a week ago. Dry beans are steadily held, but little is doing. Potatoes are quiet at old rates. White onions are in light supply and firm. Fresh vegetables from Los Angeles are bringing good prices. Oranges are doing a fair business with ample supply and prices unchanged. Lemons are quiet and no higher. Apples prices are well maintained with a fair supply of fancy and common in abundance. Dried fruits are quiet. There is some inquiry, but only for future delivery. Walnuts are steady, while almonds are not selling well at present. Wool is lifeless, except a few small sales to fill lots for scourers.

## Prune Growers' Perplexities.

There seems to be something of a ruction among prune growers. The situation is very trying owing to the large amount of prunes now unsold and naturally there is discontent and feeling against the officers. It is telegraphed from San Jose that the growers are meeting for discussion and are charging the executive with incapacity and the like and that it is due entirely to lack of business ability and foresight that the prune market is at present stagnated, and California is facing the serious situation of having a surplus of at least 50,000,000 pounds of dried prunes to carry over to next season. We do not know what are the chances of that but a semi-official statement, perhaps, is that given to the Visalia Times by Thomas Jacobs, of that city, who is a director of the Cured Fruit Association. He says the Association has on its books 110,000,000 pounds of prunes, of which 30,000,000 pounds have been sold. In the lot on hand there are 10,500,000 pounds of 120s and over, which will be disposed of probably to distillers or used as feed for horses. The best way to realize on these small prunes is being considered by the directors now. It has been ascertained that a ton of prunes will yield fifty gallons of brandy, which is estimated to be worth \$2.50 per gallon. It costs, including the revenue, about \$1.65 per gallon to make. At this rate the prunes would be worth \$42 per ton. Of course, this price can not be secured, as prune brandy is something new and a market for it will have to be established. It will probably be something of a shock to some temperance growers who held themselves free from the liquor traffic when they started to grow prunes, to find their product going for tanglefoot after all. They will be just as bad as the grape growers after all. But, if they do not like that recourse, Mr. Jacobs says they can go for horse feed. He has been feeding his small prunes to horses for three years and finds them just as good as barley. The same number of pounds of prunes are equal in value to the same amount of barley. The pits should be crushed, and horses relish them. This is all interesting, but it is rather disappointing that our great prune industry should have to apply to the distillery or the manger to dispose of the surplus. This is, of course, only for the small fruit, however. Nobody should grow small fruit.

Just as we go to press, on Wednesday, we learn from San Jose that the prune growers will hold another meeting in San Jose next Monday, to hear the results of another directors' meeting to be held before that date. The directors and the packers have their heads together and it is stated that radical measures will be taken to break the deadlock in the prune market. President Bond has been developing a unique plan for bringing the prune to the attention of the consumer, and it is understood will lay it before the board. If adopted permission will then be asked of the growers to use the money required for its execution. Under the existing by-laws, the directors have not the power to use the funds of the Association for advertising purposes. A plan will also be considered for eliminating about 35,000,000 pounds of the small prunes from the market by converting them into a by-product, possibly the brandy mentioned above. This, it is thought, will reduce the stock so the balance can be marketed this season. The foreign market has changed radically of late and it is expected to absorb a large quantity after January 1st.

In this connection it is, of course, important to

know what the president of the Cured Fruit Association says about the arraignment by his critics. He is credited with this statement:

Whatever there is of seriousness in the situation is due entirely to conditions for which the management of this Association is not responsible. The same stagnant market prevails relative to all dried fruits. The directors of this Association have studied carefully the situation, and, I think, fully understand it. I am willing to listen to the suggestion and advice of any one, but must reserve the right of adopting what I deem wise.

We are doing the very best we can, and are doing many things looking to the same end as the suggestions made by the growers. We are doing many things of which it would be unwise to speak, but which will be made public in due time. We are willing at any time the great body of growers are dissatisfied with our management to resign and let others take our places, but while we are in charge we can only follow our own best judgment.

It should be added that the San Jose Farmers' Club and Grange have passed resolutions endorsing President Bond's action and favor holding up prices, believing that the Association will work out all right.

THE craziest thing we have heard of yet in connection with the Belgian hare is the report of a grand enterprise to take all the misfit hares off the hands of their owners and found a great industry with them in Arizona. As it is holiday week, and people are a little weary, perhaps the details of this stupendous undertaking will cheer them up a little. This is the way it comes from Phoenix:

Foreseeing the fall of the hare business, a company of Arizona and California capitalists is being formed to take up the business where the small raisers left off and for the establishment of a great hare farm and a canning factory. The Southwestern Canning Co. will be the title of the corporation, to be capitalized at \$150,000. A tract of land of 640 acres will be leased in the Buckeye country, in the lower and most fertile portion of Arizona. Half of the land will be planted in alfalfa and barley to provide feed for the hares, and the other half will be used as pasture for the great herd to be quartered on the ranch.

It is intended to buy up as many hares as it is possible to obtain for the stocking of the ranch. There will be room for 250,000, and it is proposed to enlarge the ranch as rapidly as is necessary to accommodate the growth of the herd. The entire ranch will be fenced with fine wire to protect the stock from the coyotes and mountain lions and to prevent crossing of the breed with the jackrabbit. The canning factory will be erected in the spring and machinery is now being purchased in Chicago. A very large plant will be built, sufficient to dispose of 2000 or more hares per day. Every portion of the hare will be utilized, and not the least important part of the business will be the use of the skins. A New York furrier has contracted to handle all skins from the hare farm. The feet of the younger rabbits are in demand for watch chains and ornaments and the ears are strung upon ribbons and used for picture frames. The bones and other parts of the refuse will be shipped to California for fertilizing purposes.

This is hare-brained madness, indeed, and it is only December. What shall we have by next March?

It is telegraphed from Washington that the fight against the raisin duty is taking two directions, one toward an attempt to have the tariff on raisins amended and another to obtain a reciprocity treaty with the raisin producing countries admitting raisins with little or no duty. This reciprocity business is also menacing the citrus fruit products, as was clearly shown by the resolute attitude taken by the Fruit Growers' Convention in this city two weeks ago. It is very necessary that all our growers' organizations and trade organizations should offset this attack of importers by using all the influence they can muster at the East.

A THREE DAYS' Farmers' Institute at Riverside last week was largely made up of delegates from all the Farmers' Clubs of southern California. The papers were of much interest, as one of them in this week's PACIFIC RURAL PRESS will show, and the discussions were active. We shall have more of the proceedings later. The meetings were arranged and conducted by Prof. A. J. Cook, State University representative in southern California.

We trust readers will all see the call for a convention in interest of organization for fruit handling which we publish on another page of this issue. Nothing could be more important to our great fruit affairs.



## QUERIES AND REPLIES.

### Lime, Salt and Sulphur Wash for Borers and Fungi.

TO THE EDITOR:—Will you advise me in regard to spraying my seven-year-old peach trees for borers on the limbs. I understand caustic soda, 10% strength, is the thing. If this is true will it do to mix it with lime, sulphur and salt, and spray now. My orchard has never been sprayed. Will it be necessary to cut the affected leaves off? They are numerous. —GROWER, Dos Palos.

You cannot reach the borers which are in your trees by any spray. Branches which are very badly sunburned and filled with borers should be removed. Those which are less affected can be saved by applying a good whitewash spray after the heavy winter rains are over and just before the buds open. This will prevent further sunburn and prevent the entrance of more borers. The borers which hatch from eggs laid on the surface by a small coppery beetle all reach full growth and come out of the tree in less than a year, and you must see that no more go in by keeping the injured part covered with whitewash. If the trees are vigorous they will grow over the injured parts.

Do not put caustic soda into the lime, salt and sulphur wash. Use the following recipe which is not only fitted for such use as we have described, but is also very effective for winter use upon deciduous trees for curl leaf, mildew, etc.:

Unslacked lime, forty pounds.

Sulphur, twenty pounds.

Stock salt, fifteen pounds.

Water to make 100 gallons.

Place ten pounds of the lime and twenty pounds of sulphur in a boiler with twenty gallons of water, and boil over a brisk fire for not less than ONE HOUR AND A HALF, or until the sulphur is thoroughly dissolved. When this takes place, the mixture will be of an amber color. Next place it in a cask thirty pounds of unslacked lime, pouring over it enough HOT WATER to thoroughly slack it; and while it is boiling add the fifteen pounds of salt. When this is dissolved add to the lime and sulphur in the boiler and cook for HALF AN HOUR longer, when the necessary hot water to make the 100 gallons should be added.

Curl leaf and mildew are becoming quite prevalent. The above wash is recommended by the Horticultural Commissioner of Sutter county and should be applied while the trees are dormant. Do not boil all the ingredients together, but follow the above direction explicitly, if you desire good results. If used for San Jose scale, use sixty gallons of water instead of 100 gallons.

### Pruning Apricots.

TO THE EDITOR:—Which is the best way to prune apricots—one and two-year-old trees? The one-year trees made lots of wood and are covered with short spurs. Some advise cutting them all off; others say leave them—they do no harm. I do not know which is best. Will you kindly answer?—SUBSCRIBER, San Jose.

Young apricots at first winter pruning should have the previous summer's growth shortened to about 12 inches, selecting four or five to form the main branches of the tree, and choosing them at various points up and down and around the stem, so as to balance well. Other strong shoots not needed for branches should be cut off clean. The short spurs should not be removed. The leaves on them shade the bark and tend to strengthen the branches also. The trees which are now to have their second winter pruning should have the branches also shortened and surplus ones removed, so that the tree has eight or ten branches well placed. Short spurs should not be removed. Some of them will bear a little fruit next summer.

### Valley Fruits.

TO THE EDITOR:—I desire to receive information in regard to the best variety of fruit trees to plant in Tehama county, on the west side of the Sacramento river, near Corning. Is the soil there adapted to prunes?—ENQUIRER, Nevada county.

It would be rather hard to find a soil which is not adapted to prunes, because the prune succeeds on such a wide range of roots that almost any soil can be suited. Heavy clay loams suit the myroblan, medium to light loams suit the peach, and light sandy loams suit the almond. On all these roots the

prune succeeds. We do not mention the heavy clay or adobe soils because they are usually too rebellious to enable the grower to secure the perfect surface tilth which favors his work, and which he should be able to secure with ease and cheapness. But in planting the prune there are other considerations than soil. There should be moisture enough to make a good, large prune, and there are places in the State where the high summer heat hastens the maturity of the fruit before it gets size and richness of juice. Again, we doubt whether the prune area should be much enlarged at present. It would be wise, perhaps, to wait and see how the market behaves under the immense product which is now turned out. We look upon the best canning and drying peaches as worth the attention of interior valley planters, while almonds and apricots, where the soil is right and the location not too frosty, are also promising. Canning and shipping pears come in for consideration where the soil is heavy and frosts too intrusive.

### Peach Moth.

TO THE EDITOR:—What can be done to prevent the peach moth from working on the buds of young peach trees? In my young orchard there are places where they have been preying on the trees ever since planting, three years ago, and in this valley there are more or less of them found in the fruit. I sprayed last two years with lime, sulphur and salt, but the spray has had but little or no effect in eradicating them.—ORCHARDIST, Solano county.

The grubs or larvæ of the peach moth are now ensconced in burrows in rough bark in the forks of the branches, where they pass the coldest weather. They can now be killed in winter quarters and spring and summer injuries of the new brood avoided. The lime, salt and sulphur, if thoroughly well made, as described in answering another question on this page, and freely applied to all hiding places, will destroy the worms. A more penetrating and better treatment, perhaps, is the winter strength of kerosene emulsion, made as described below. It is very important to make free application at the rough places in the bark all through the tree, so that the wash will penetrate to the burrows:

Kerosene, two gallons.

Water, one gallon.

Hard soap, one-half pound.

Make a suds of the soap and water and pour boiling hot into the kerosene; churn with a force pump or a syringe, pumping out of and into a bucket or barrel through a nozzle until completely emulsified. If the mixture is sufficiently hot, it will thicken in from five to ten minutes, and will be, when cold, of the consistency of butter or of soft soap. Dilute with seven parts of water to one of emulsion for winter use on deciduous trees. One part to twelve parts of water is strong enough for active insects when the trees are in leaf.

### Beans for Tulare.

TO THE EDITOR:—Can you give me any information in regard to most profitable bean to plant and the kind of soil it is adapted for?—SUBSCRIBER, Tulare county.

The most profitable bean to grow depends upon your local conditions. Most beans delight in the moderate heat and moisture of the coast region from San Luis Obispo to Los Angeles, and from this region comes our greatest bean crop. Some beans will not endure the dry heat of the interior, and the Lima is a representative of that class. Other beans are quite satisfactory in the upper valley where you write from, and the Pink bean is usually held to be best for your conditions. On the islands of the San Joaquin and Sacramento rivers, there is moderate heat and moisture and a greater list of beans succeed, but the Large and Small Whites are chiefly grown. The best soil for beans is a light free loam.

### The Peach-Almond.

TO THE EDITOR:—I send a sample of hard-shelled almonds, their general character indicating a reversion to the ancient order of fruit condition when the peaches were the outgrowth of the almonds. Kindly examine sample, and let me know how you would classify it.—READER, San Francisco.

The nuts which you send are the peach-almond, an old sport or freak. It has long been known, and whether it is reversion or arrested evolution, or what, no one knows. Seedlings from it have been advocated and slightly used as a stock for peaches, but it

has never come into wide use for any purpose. Its chief office seems to be to excite interest as a novelty among those who do not know how much of a horticultural chestnut it really is.

### Rye Grass Will Do.

TO THE EDITOR:—I have lands situated near one of the small rivers of California. They are flooded in wet winters, but nevertheless become quite dry in the fall; the lower portion will not raise alfalfa except in very dry seasons. Will these more depressed portions produce and maintain rye grass with success, and, if so, which kind—the Italian or the Australian—and how late in the spring can it be sown with reasonable hope of securing a stand?—A. C. FREEMAN, San Francisco.

Australian rye grass, which is merely an acclimated form of English or perennial rye grass, will do better than any other grass we know of in the place you describe. We are not quite sure how the Italian compares with the other. There is some reason to count it better in this State than it is in the East. Mesquit (*Holcus lanatus*) is also worth trial. We can not say just how late you can sow it. It depends on whether your place is in the interior or on the coast. Sow as early as you can work the land.

### Apricot on Prune.

TO THE EDITOR:—Can a prune orchard of fifteen-year-old trees be successfully grafted into apricots? I have ground (free from frost and well adapted to apricots) now in prunes. I believe there is more profit and a better future for apricots. What do you think?—J. H. MCCOLLOUGH, Irvington.

Yes; the apricot grows on plum stock, and is worked that way abroad more than it is in California. As to the profit in the operation we would prefer not to speak. We know some growers are not pleased with the apricot on plum, but local conditions may have something to do with that.

### Quince Cuttings.

TO THE EDITOR:—When should quince cuttings be put in and do they root readily?—AMATEUR, San Jose.

They usually root very readily and they can be put in at any time during the winter, except when there is water-logged soil owing to heavy cold rains. The way the weather now is, cuttings can be put in at once. In heavy winters it is better to wait until the ground warms up a little in February.

### The Ferret Fails With Squirrels.

TO THE EDITOR:—In answer to your Davisville correspondent, I know of ferrets being imported for the purpose of hunting squirrels and they proved a grand failure. The squirrels were too heavy for them and fought them in the holes. They drove none of them out. The idea was to have the ferrets drive them out and then shoot them. I never tried them on the gopher. They were death on the rats.—SUBSCRIBER, Clayton.

Thank you. This shows the value of our query columns. They are a valuable clearing house for up-to-date information.

### Polled Durhams.

TO THE EDITOR:—Do you know of any pure-breed polled Durham cattle in this State? If so, please advise me as to the name of parties owning such cattle.—C. B. VINEYARD, Knights Ferry.

This breed has arisen by selection, etc., in Ohio. We do not know that any of the cattle have yet been brought to California.

### Rainfall and Temperature.

The following data for the week ending 5 A. M. Wednesday, Dec. 26, 1900, are from official sources, and are furnished by the United States Weather Bureau for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week. | Total Seasonal Rainfall to Date. | Total Seasonal Rainfall Last Year to Same Date. | Average Seasonal Rainfall to Date. | Minimum Temperature for the Week. | Maximum Temperature for the Week. |
|----------------------|------------------------------|----------------------------------|-------------------------------------------------|------------------------------------|-----------------------------------|-----------------------------------|
| Eureka.....          | 2.08                         | 20.15                            | 25.22                                           | 15.38                              | 40                                | 64                                |
| Red Bluff.....       | .25                          | 8.71                             | 9.79                                            | 9.52                               | 34                                | 62                                |
| Sacramento.....      | .14                          | 8.04                             | 8.04                                            | 6.82                               | 36                                | 62                                |
| San Francisco.....   | .13                          | 7.22                             | 9.00                                            | 8.26                               | 44                                | 62                                |
| Fresno.....          | .01                          | 5.43                             | 9.97                                            | 3.29                               | 36                                | 60                                |
| Independence.....    | .00                          | 2.27                             | 4.47                                            | 2.05                               | 28                                | 64                                |
| San Luis Obispo..... | .00                          | 8.92                             | 1.67                                            | 4.17                               | 40                                | 70                                |
| Los Angeles.....     | .00                          | 6.78                             | 3.35                                            | 5.92                               | 40                                | 76                                |
| San Diego.....       | .00                          | 1.73                             | 1.82                                            | 2.82                               | 56                                | 76                                |
| Yuma.....            | .00                          | .02                              | .58                                             | 1.62                               | 38                                | 76                                |



## Agricultural Review.

### BUTTE.

**A PLEA FOR GOOD ROADS.**—Biggs Argus: Butte county will never succeed in having good, permanent roads so long as the present and past system of patchwork continues. Without a foundation of permanent effect can be expected. The "house built upon sand" will withstand the forces of nature as long and as safely as a road of gravel a few inches thick across a marsh. Napoleon set his soldiers to work crushing rock with sledge hammers, and the road built by his army is a living evidence to-day of the only system of making good, permanent highways. Macadam left a similar example, and every country that has adopted the macadamizing system has proved a lesson of economy. The saving on stock and vehicles with good roads will in a few years more than make up for the extra cost of building of solid highways, to say nothing of the decrease in the cost of hauling the products of the field to the shipping points over firm roads as against wear, breakage and time lost by the continuance of the roads as they are found in Butte county after every rainy season. With good roads Butte county lands 10 miles distant from town will be worth as much per acre as land 3 miles distant accessible only over ruts, washouts and mudholes.

### CONTRA COSTA.

**LARGE ORANGES.**—Antioch Ledger, Dec. 22: Robt. Cakebread handed to us this week a Navel orange measuring 14 inches in circumference, 6½ inches in diameter and weighing over a pound, the fruit being from a tree in Antioch. The tree is full of the same kind of oranges, and are probably the largest grown in Contra Costa county. The tree presents a handsome appearance as it pines for the sun every day, and it seems a pity that they have to be finally picked. Incidentally, we might state that Mr. Cakebread is going to join the great army of almond growers in eastern Contra Costa. On his place near town he will plant 1500 almond trees this season.

### EL DORADO.

**SOME OF THE TRIALS OF RANCHERS.**—El Dorado Republican: John Hassler, who lives 4 or 5 miles east of town, brought in some roots of evergreen millet the other day to show what a rancher has to contend with. The millet came to him mixed with some alfalfa seed from Utah. It is the worst kind of a pest he finds on his ground and is killing out everything else. The roots break into joints and every joint grows like a tapeworm. The worst of it is that the millet is devouring Hassler's potatoes. He showed us two spuds into which the millet had forced its roots, one of them splitting the potato, and evidently intent on making a meal of the tuber. As some recompense for these troubles, Mr. Hassler has discovered on his place a valuable seedling apple. It was neglected for some years, but the fruit proved so handsome that he is now cultivating it. It is a fine, large, solid red apple and keeps till April.

### KINGS.

**FRUIT FOR LIVERPOOL.**—Hanford Sentinel, Dec. 20: The Fontana Co. here have just finished boxing and loading 1000 cases of the choicest peaches for Liverpool. Every can was thoroughly examined to see that it was perfectly tight, and then varnished, both top and bottom, to protect it from rust, which might be caused from the sea atmosphere. The warehouse at the cannery has been nearly emptied of its canned fruit, and the space made by the season's shipments has been filled with storage raisins belonging to the California Dried Fruit Association.

**BIG CANAL SCHEME.**—Hanford Journal: In a real estate office of this city is a map of the big proposed supply canal, which is to take water from Kings river, Cross creek, Tule river and Elk Bayou and distribute it all over the country about Tulare lake and in the district be-

tween Cross creek, old Tulare lake and the main line of the Southern Pacific Railroad. The route of the canal is from its headgate on Kings river southeast through the Kings county "bay window," thence it meanders a few miles west of Gesheh, Tulare, Pixley and Alila into Kern county, then it takes a southwesterly course and runs to within a few miles of Geese lake, Kern county, which is nearly 30 miles south of the old Tulare lake's southern margin. Thence it is to run northwest to a point near the hills west of old Tulare lake. A lateral canal is to start out from the main canal near its head and take water down into the Dallas country. The new canal will be one of the largest in the State and also one of the longest if the entire canal is built.

### LOS ANGELES.

**LUCK WITH ALFALFA.**—Los Angeles Times: There is a man out at Whittier with twenty acres. When he got the land he thought he would put it out in walnuts, but, after thinking the matter over for a while, he decided to try it in alfalfa for a year and consider the walnuts later. Up to just before the heavy rain of last month he has reaped seven crops of alfalfa in the season, and just after the rain he went out and gathered fifty sacks of walnuts from his twenty acres. The heavy storm washed the nuts down from neighboring groves.

**FEEDING ALFALFA.**—Correspondence Los Angeles Times: Some months ago there appeared in the Times a paragraph regarding the beneficial effects of feeding green alfalfa to milch cows, speaking particularly of its prolonging the period of lactation. Permit me to speak of this from experience. We have two cows, Beauty and Bonita, the former a grade Guernsey, nine years old, the other a grade Jersey, four years old. For a year or so past we have had an alfalfa patch about 90 feet long, from which I mow a strip about 3 feet wide across it daily. It therefore usually lasts just about a month. I divide the cut alfalfa between the cows at noon. After getting to the end of the patch I begin at the other end and go over it again, watering it as I cut it. In the summer it is generally coming into bloom when cut. It has been a frequent remark in our family for some time past that "Beauty has never held out on her milk so," and that is the case. I think it also tends to keep the cows healthy. They have not been outside the corral for months, yet it is rare that anything ails them.

### SAN BERNARDINO.

**HAPPY ORANGE GROWER.**—San Bernardino Sun: The orange harvest is in full swing in all parts of the county, and that's why people smile. The export of fruit from Redlands alone for weeks has been estimated at \$20,000 a day, while when the whole county is included, it will not fall below three times that amount. The first rush of the orange picking is practically ended. The hundreds of carloads that have been going out for the past few weeks are for the holiday trade in the East. In Highlands particularly are the orchardists delighted with the situation. It is stated that more crops have been sold on the trees than ever before at this season of the year, orchard after orchard having been contracted as the fruit hangs and at prices that leave no room for complaint on the part of the owner.

### SANTA BARBARA.

**INCREASED SEEDING OF RED OATS.**—Lompoc Record: There will be 2000 or 3000 acres of Red oats sown the coming season on our lighter mesa lands. The yield was good last season and the hay said to be first-class. This cereal thrives and matures on less rainfall than barley, and is in better demand at a higher price; the yield is about the same. If this variety of the oat is exempt from rust, which is claimed for it, a condition we fear in a wet year, it is a good crop for the lighter upland.

### SANTA CLARA.

**BIG LAND SALE.**—San Jose Mercury, Dec. 19: Conveyances were placed on record in the office of the county recorder yesterday, both in Santa Clara and San Mateo counties, involving the transfer of lands the consideration of which amounts to \$373,000. The San Mateo lands included in the transaction embrace 421 acres of the estate of Horace Hawes, being the homestead, including the mansion and beautiful grounds laid out by that gentleman adjoining the town of Redwood. The consideration of this property was \$100,000. The property involved in the transaction in this county consists of 2600 acres of the unsold portion of the hill and valley lands of the San Martin ranch, sold to W. S. Richards of this city, and also 1600 acres of said ranch, being the balance of the unsold portion of the valley land, to a syndicate, the Santa Clara Land Com-

pany. The revenue involved in the transaction amounts to \$302.

### SANTA CRUZ.

**MORE APPLE TREES IN BLOOM.**—Santa Cruz Surf, Dec. 20: Nature has been playing some peculiar freaks in the orchards. J. G. Roos, who resides in the Redwood district, reports that prior to the recent rain his apple trees were in bloom for over a week. The blossoms were blown off during the storm and he doubts now whether he will have a crop. He believes that the dry spell is accountable for the premature blossoming.

**ARKANSAS BEAUTY APPLES.**—Watsonville Pajaronian: M. A. Hudson has a number of Arkansas Beauty apple trees in his orchard near Pajaro. Samples of the fruit which he has sent us show well. It is streaked with red, is of a good shipping size, is choice in flavor and looks as if it would stand long distance shipping. We prefer its flavor to the Langford, and it seems to be without the spots which often mar the Langford. We believe that Mr. Hudson has introduced a profitable variety of apples. He says it is a strong bearer and that the fruit holds on well.

### SHASTA.

**SELL THEIR PEARS TO THE COMBINE.**—A Redding dispatch of recent date says a contract has been signed by a large number of the pear growers of the Anderson valley, representing two-thirds of the total crop, whereby they agree to sell their whole product each season for five years to the California Cannery & Packers' Association at \$20 per ton. It is likely that in a few days 90% of the pear growers will sign a similar contract, the price being considered fair and leaving a good margin. Anderson pears bring the best price on the London market and require but one-third the quantity of sugar needed for canning other varieties. The company will use the total product in their Chico cannery.

### SONOMA.

**HUNTING FOR GOVERNMENT LAND.**—Sebastopol Times, Dec. 19: The Government land craze has struck Sebastopol, and for several days past many people have been tracing the lines of the Sonoma county atlas in search of land that is really owned by the parties located thereon. It is reported that some genius has discovered about ten acres of Government land somewhere on the plains east of town, and the circulation of this rumor has led other persons to believe that there must be more land in this neighborhood on which the titles are not perfect. If the discoveries made in the atlas can be relied upon, a portion of nearly every farm between Sebastopol and the coast and from the Washoe House to Vine Hill is Government land. Up to the present time no seizures have been made, but many old settlers are looking over their abstracts and deeds in order to satisfy themselves that their titles are ironclad.

**SALE OF FOUNTAIN GROVE.**—By the terms of a deed filed for record at Santa Rosa, Thomas Lake Harris and wife of New York transfer to Kanai Nagasawa, Miss Nicholas, Miss Margaret Parting of Santa Rosa and Robert Morrisart and Mary Elizabeth Hart of New York their entire remaining interest in the property known as Fountain Grove, a short distance north of Santa Rosa. The consideration named is \$40,000, and a peculiar clause in the deed provides that the grantees shall hold a life tenure, and the property finally is to revert to the one who lives the longest and to his heirs and assigns. Fountain Grove was the former home of the celebrated founder of the community, established here some twenty-five years ago by Thomas Lake Harris, the mystic. It is one of the finest and most productive properties in Sonoma county, and is commonly regarded as worth at least a quarter of a million dollars.

### SOLANO.

**OIL EXPECTED TO REDUCE THE PRICE OF WHEAT.**—Vacaville Reporter: The opening up of new oil fields assures to California a cheap steam making power. This is certainly a great benefit. It will keep a great deal of money in California which has hitherto been sent away in payment for cargoes of coal imported into the State. But it is likely to have an injurious effect on the wheat industry, which is none too prosperous at present, in that by doing away with the importation of coal it will remove the possibility of cargoes for ships coming here to load with wheat. This means an increase in the cost of wheat transportation and a further imposition of burdens on the growers of cereals, who have to look to Liverpool for a market. That in time conditions will readjust themselves can not be doubted. The substitution of oil

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for coal, however, will surely lower the price of wheat in proportion as it limits the importation of coal by vessels coming here to load with grain.

### TUOLUMNE.

**BLACK LEG AMONG CATTLE.**—Sonora Mother Lode: Black leg is raging among the cattle in Stanislaus, Merced, Mariposa and the southern part of Tuolumne county and the cattlemen of this section are on the alert to keep it away from their herds. There is a law against driving affected cattle and a \$500 fine is provided as punishment. Black leg is a terrible disease and was prevalent in this county some years ago, causing our stockmen great loss and trouble. It has been stamped out, the Tuolumne herds being now clean, and the owners are determined that they shall be kept so.

### TULARE.

**APPLES DESTROYED BY BEARS.**—Tulare County News: O. P. Osborn of Milo passed through Visalia the other day with a four-horse load of fine mountain apples which he was taking to Hanford. Mr. Osborn states that his apple crop is about one-third less this season than it was last year. Some damage was done to his apple crop by the large number of bears that were forced down into the lower hills for feed this season, but close guard was maintained by Mr. Osborn, who killed thirteen bears during the past few months. He is of the opinion that most of the bears have been killed.

**DEPREDACTIONS OF COYOTES.**—Visalia Times: Coyotes have become so numerous in Tulare county that farmers find it almost impossible to raise chickens or turkeys, and young pigs are gobbled up rapidly, too. Coyotes invade the suburbs of Visalia and get away with chickens and turkeys. Something will have to be done to rid the country of the pest, or chicken raising and hog growing will become unprofitable industries.

**HOOKING FOR ORANGE LANDS.**—Visalia Times: A gentleman from Winnipeg, who visited the citrus belts of Exeter, Lindsay and Porterville, was very much pleased with the country, and writes to a friend residing in this county that many people are coming to California from Winnipeg with the purpose of securing orange lands. The visitors will be given a hearty welcome on their arrival. The gentleman further states that there are about 1000 of these Winnipeg people who will settle in California this year.

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## HORTICULTURE.

## From a Canner's Point of View.

By J. W. NELSON, of the California Cannery Association, at the Fruit Growers' Convention.

Some of the products of the orchard keep tolerably well all the year around, but most of them do not; hence arises the fruit canner's art, and thanks to it the most delicious of the products of the orchard can now be had in prime condition every day in the year. When we reflect that this tonnage runs over a billion pounds, we have but a faint conception of the number of tables necessary to accommodate it, to say nothing of the millions who gather around them to partake of this most valuable food. In almost every city and hamlet in this country and in the United Kingdom, in the illes of the sea, in fact in every city of any prominence in the commercial world, canned or preserved fruits from California's orchards may be found on somebody's table, and can be obtained all the year round.

**SKILLFUL GROWING.**—The growing of fruit is as much a science as is the profession of civil engineering, and the one most conversant with it will have the best success. It is because of a lack of knowledge of this science that many blunders have been made in fruit growing all over the State. For instance, apricots and cherries have been planted in soil where peaches and pears should have been set instead and vice versa, and this has been true of other varieties as well, but there is no excuse for such errors from this time forth; as experience and a better understanding of the subject has taught what to plant and when to plant it.

**WHAT CANNERS DESIRE.**—A matter of great importance is to raise fruit of proper size and quality. Apricots for canning should average not more than ten to the pound; while Tuscan, Golden and Phillip clings, Muir and Lovell free peaches should be not less than 2½ inches in diameter, and all other varieties of clings and free peaches 2½ inches in diameter. Cherries should average ¾ inch in diameter and upward; plums about twelve to the pound, and Bartlett pears 2½ inches in diameter.

It is best to plant those varieties of trees with regard to different periods of ripening so that the canner may have a longer season for packing. For instance, Tuscan clings are the first to ripen; then follow in succession Nichols, McDevitt, Sellers, Orange, Golden and Phillips; all varieties of which extend over a period of six weeks.

Apricots and peaches when picked should be firm but ripe, not over-ripe and soft. Pears are suitable when the seed in the fruit is about to turn to a dark color.

Some of the best varieties to set out for canning purposes are: Blenheim, Royal and Moorpark apricots; Muir, Lovell, Crawford and Mary's Choice free peaches; Tuscan, Nichols, Sellers, McDevitt, Orange, Lemon, Levi, Golden, Phillips and White Heath cling peaches; Royal Anne, Centennial, Rockport, Burr Seedling and Black Tartarian cherries; Bartlett pears; Yellow, Egg, Gold Drop and Green Gage plums.

**INTERESTS MUTUAL.**—The interest of the grower and canner is reciprocal; the latter is a large patron of the former, buying from him over 140,000,000 pounds of fruit annually, and to be successful they must at all times work hand in hand together. Oftentimes differences arise between them in regard to deliveries of fruit which do not come up to the requirements of the contract, either in size, quality or proper condition, and, as a consequence, the canner makes a vigorous kick and is compelled to make rejections.

It is a fact that some growers have made a tender of fruit for canning that should have been left at the orchard and fed to the stock. Nor is sufficient care taken in picking fruit. Some actually throw peaches and other fruit in the box as though they were so many potatoes, when they should handle them as carefully as eggs to avoid bruising. When fruit is bruised decay sets in and renders it unfit for canning. Then, again, fruit is often shipped in large boxes containing too much weight. Think of shipping 2½-inch cling peaches in Fresno sweatboxes, requiring the strength of two men to handle, and an idea can be formed as to the condition of the fruit on arrival at the cannery. Several cars were so shipped this year. No fruit, especially peaches, should be shipped in boxes containing more than thirty-five pounds. Another objection is the picking of fruit too green instead of in a ripened state.

If our tables are to be properly supplied, then fruit must be clean, of proper size, free from insects and gathered and shipped in proper condition. Do not imagine for a moment that people are not particular as to what they get in canned fruit; they are very discriminating indeed and any old thing will not satisfy them.

It will not do to send to market trashy fruit, expecting first-rate returns; nor is it to be supposed that the consumer will accept it without remonstrance. It were better a thousand times to keep it

on the ranch, and ship only such as will be acceptable to the buyer.

If our fruit growers of California are alive to their interests, they will put forth their best efforts to produce an article of unexceptional quality and be willing to offer it at a price that will enable the average wage earner to purchase it.

**THE PRODUCT.**—The institution with which I have the honor to be connected is a patron of the growers for one hundred or more million pounds of fruit, which is put up in its twenty-eight factories, and employs something like 9500 men, women and girls to handle the same. To these are paid, during the canning season, over \$750,000 in wages. Its output of fruit and vegetables annually exceeds 60,000,000 cans, a no small factor in supporting the fruit industry of the State.

The best market for California preserved fruits is in the United States. Because of its great wealth and the earning capacity of the masses more fruit is consumed by it than by any other nation, although the United Kingdom is a large buyer. Fruit is recognized as it never has been before as a dietary necessity, and with a proper regard for quality and the natural increase in the world's population, the tables for California's preserved fruits are capable of almost indefinite expansion.

## Sugar Prune on Peach Stock.

TO THE EDITOR:—I have been an interested reader of the communications lately appearing in your paper from J. T. Bogue of Marysville, T. J. True of Forestville and Luther Burbank of Santa Rosa regarding the advisability of budding Sugar prune wood on peach stock.

Mr. Burbank says: "I have Sugar prunes grafted and budded on peach, almond and plum, and on my own grounds all have made a perfect union."

Mr. Bogue and Mr. True say that the Sugar prune does not do well when budded upon peach stock. Surely it is no disparagement to the other gentlemen to say that Mr. Burbank is the best authority on this subject. His statement that the union is a perfect one should end the discussion as far as the stock which Mr. Burbank uses, to-wit, stock from the Wager-Muir family, is concerned. One can not have better than a "perfect union." Something in the peach stock used by the other nurserymen, or something in their method of handling the stock, is accountable for their non-success. I take this opportunity of offering my contribution to the stock of knowledge on this subject.

**THE WRITER'S EXPERIENCE.**—In January, 1899, I bought 25 feet of Sugar prune wood from Mr. Burbank, with which I grafted three large almond trees on my place near Biggs. From the grafts on these three almond trees I budded in June about 100 large peach trees, which I had cut down for this purpose in the winter. In October I budded 4000 vigorous seedling peach trees to Sugar prunes. The peach seed I got from the seedling peach orchards near Vina. In the winter time I was able to graft fifty-one large almond trees and one large Tragedy prune tree from the growth of the budded peach and almond trees. These I had kept vigorously growing by irrigation and fertilization. I also planted out thirty acres of land with the dormant Sugar prune trees. In June of this year I budded 10,000 seedlings, also on peach stock, and in October I budded 100,000 seedling peach trees. I have, therefore, Sugar prune wood grafted on almond and prune stock and budded on old and young peach trees.

**RECENT EXAMINATION.**—Since these articles appeared I have examined my Sugar prune trees very carefully, and I assure the readers of the PACIFIC RURAL PRESS that I have yet to find a single imperfect union. The Sugar prune takes as readily to seedling peach trees as it does to almond stock. In the words of Mr. Burbank, it makes a "perfect union." My orchard is about 12 miles from Mr. Bogue's place, and he can easily satisfy himself as to what I say by making a visit there, where he will be cordially received. The only peculiarity which we have been able to notice regarding the Sugar prune is its extreme backwardness in starting to grow. When it does start it grows rapidly.

**A WIND TEST.**—In the recent heavy wind storm which passed over the State I had 250 young French prune trees blow over. The storm was in such violence that it blew down my cutting shed and a portion of my irrigating flume, and broke short off some of the roots of the trees that were blown over. The orchard of yearling Sugar prunes which I had planted bore the full force of this wind. I have yet to discover a single one that showed any sign of waver at the point of union.

San Francisco.

This discussion has extended into Oregon, for they expect to use the Sugar prune up there to replace some of their Italian prunes. S. D. Evans, a nurseryman at Cleveland, Oregon, writes to the Rural Northwest:

I see an orchardist in California thinks the Sugar prune will not unite to peach stock. I suspected as

much myself, for this summer a sharp wind broke off many of mine in the nursery row; yet the originator assured me it united perfectly. Of course, if known in time it will cause no trouble, as it can be double worked on other varieties than the peach. But after the stock is budded on peach, then what?

Several years ago, as an experiment, I put out an orchard of Italians 15 to 20 inches below where the bud was inserted—that is, set them that much deeper than they stood in the nursery. They started very slow and did not make much growth the first year, but have done well since. They put out roots from the body above the bud. Some few roots that were broken by the plow have thrown up sprouts.

These Sugar prunes have cost money, and it will take time to rebud into other stock, and I am going to try the above plan of deep setting. They may be bad about sprouting from the root, but that is a chance I will have to take. The soil I made this experiment in is river bottom and well drained.

## A Grower's Address on Fertilization.

P. J. Dreher is a prominent orange grower of Pomona and manager of the San Antonio Fruit Exchange. He recently addressed the Pomona Farmers' Club by invitation on the subject of fertilizers. The Pomona Times made a very full report of the address, a copy of which we submitted to Mr. Dreher for any corrections he might desire to make. The following is the address as revised by Mr. Dreher for the PACIFIC RURAL PRESS:

**A STUDY OF THE ORANGE.**—Mr. Dreher said his remarks would be from the standpoint of an orange grower; that he had given up deciduous fruits and concentrated his thoughts on the orange—how to grow the best oranges so as to secure a ready market and the highest price. It is necessary to produce good oranges to secure a demand for them. He first studied the Florida orange, which is sweet and thin-skinned, and later the California product, the soils and climates in which they grew, the cultivation and fertilization given them and their chemical contents, and found as follows:

Florida oranges as analyzed by Prof. Earle, fifteen varieties average, per 100 boxes of fruit, about 15 pounds nitrogen, 10 pounds phosphoric acid and 60 pounds potash.

California oranges, according to Prof. Hilgard of the State University, 100 boxes analyze about 12½ pounds nitrogen, 3½ pounds phosphoric acid and 14 pounds potash.

**APPLICATION OF FERTILIZER.**—Taking the above analyses as a basis with the intention of applying more chemicals than California oranges analyze and less than the analysis of the Florida oranges show, and taking into consideration the fact that the wood and leaf all need and require a certain amount of chemicals, I believe a proper basis, and one which I use as a guide for my own growth, is to apply 1½ pounds actual nitrogen, 3 pounds actual phosphoric acid and 1 pound actual potash for a tree eight to nine years old bearing about four packed boxes of oranges. These chemicals, when purchased at wholesale or imported as received now through the Southern California Fruit Exchanges, would cost from 31 to 35 cents per tree, or 6½ cents per pound in these proportions. As to whether the above basis and amount is correct or not, each grower must settle for himself, considering the conditions of soil upon which his trees are planted.

One of the largest fertilizer manufacturers recommends from 28 to 45 pounds of his fertilizer for bearing trees. The chemicals, according to his guaranteed analysis, in this quantity would be from 1 to 1½ pounds actual nitrogen, 2½ to 3½ pounds actual phosphoric acid and 1½ to 2½ pounds actual potash, showing from 4½ to 7 pounds of actual chemicals or plant food in the quantity above named.

The basis from which these chemicals are derived and their values are about as follows: Nitrate of soda contains 16% of nitrogen, or 18½% of ammonia, and the present market value is about 11 cents per pound for the former and 9½ cents for the latter.

Dry blood of a high grade contains 13% of nitrogen, or 15% of ammonia, and at the present market value would cost 18½ and 16 cents per pound for the chemical.

**BARNYARD MANURES.**—The value of sheep or barnyard manures, based upon the analysis given by the United States Department of Agriculture, would be about \$2.25 per ton for the sheep manure, \$1.90 for horse manure and \$1.20 for cow manure. This basis is no doubt correct throughout the Eastern States and for fresh manure, but it is not so in California or for California manures, which are much richer in the chemical elements and no doubt worth twice as much, or, in other words, contain fully twice as much chemical element in proportion to the weight, especially if it is dry and not soaked with water.

In addition to this chemical value, there is another great value in manures in the matter of humus which is essential for plants and also improves the mechanical condition of the soil. This value can hardly be estimated except by the grower, according to the condition of his soil.

There is no doubt in my mind but that, where



growers can purchase dry barnyard and fresh sheep manures at prices that will not cost them to exceed 3 cents per cubic foot for the former and 5 cents per cubic foot for the latter, it is the cheapest fertilizer they can purchase and should be used quite freely; but it must be borne in mind that the effects of the surplus of nitrogenous fertilizer, especially of vegetable or organic origin, is not advantageous for the crop of fruit growing, as the tendency will be to have the fruit coarse, large, thick rinds and of poor flavor. A sufficient quantity of nitrogen is shown by the dark green foliage of the tree, large leaves, etc.

**WHAT FERTILIZERS ACCOMPLISH.**—Mineral nitrogen has a tendency to stimulate the production of fruit, and it is claimed will not give the tree the indigestion or disease called dieback, which is very prevalent in Florida, supposed to be because of an excess of vegetable and organic nitrogen.

Phosphoric acid is the element which makes an abundant crop of fruit and of fine flavor; an excess of same will be shown by the small size of the fruit. It is, in my judgment, the most necessary element and is the real food for the fruit.

Potash in excess will be noted by the slow development of good growth both of leaves and tree. The effect of potash upon the fruit is to make it very juicy, sweet and of rich flavor, thin rind and fine aroma. The question as to whether there is sufficient potash in our soil has often been raised and disputed. We are not willing to take issue with any of the persons in this controversy, and have found a safe rule to apply a reasonable quantity of potash until we see the effects on the tree in showing an excess. It is possible that some of our potash in the soil is not available at this time, but may become so later. This part we are willing to leave for agricultural chemists to decide.

The quantity stated in our first remarks is of course to be used according to soil conditions; one having a stronger soil might need less, while others having a soil largely devoid of chemical elements might need an increased quantity.

**IRRIGATION WATER.**—Another matter to be taken into consideration is the fertilizer which may be prevalent in irrigation waters; this, we think, is not the case in artesian waters or waters flowing from mountain tunnels. There is no doubt a large quantity of fertilizing matter in all waters that flow over the surface of any of our hills or valleys, as they gradually and continually dissolve vegetable as well as mineral matters, which the water carries with it.

**GREEN MANURING.**—Mr. Dreher thinks green fertilizer, peas, lupins, vetches or burr clover could be profitably grown between alternate rows, changing each year. He would like to see some one give burr clover a fair trial. It is native to the country and needs less water than most other plants.

[Burr clover is not a native, but it has been here probably since early Mission times. It is considered of large account for plowing under in the orchards of the central parts of the State.—Ed.]

### Lemon Pruning Experience.

By CHARLES R. PAINE of Crafton, at the University Farmers' Clubs Institute, Riverside, Dec. 19.

My own custom has been—and it was the common one—to shorten the top and side growth of the lemon tree annually. This resulted in a multiplication of new branches, covering almost impenetrably the outside of the tree, whose growth drew heavily upon its energies. Where blossoming was heavy, the crop was unsatisfactory in amount, for an undue proportion of sap was directed to the ascending shoots. It was a partial remedy to thin out the fast-forming shoots, but the process was tedious and expensive. A tree never pruned was almost as satisfactory. In our second dry season—that of 1899—instead of shortening and thinning the upright parts, I cut them out entirely, both large and small growth.

My chief motive was to use the irrigation water solely for the benefit of that part of the tree that consisted mainly of fruit-bearing wood. This work of cutting out every branch that went upward close to its junction with outward-growing branches was done in early July of that year.

A part of the orchard was not watered well enough to make any growth until late in the autumn, the water being used in preference on orange groves.

Other parts of the lemon orchard were fairly irrigated, thus affording an opportunity to contrast crop results.

No other pruning was done until the following June. Then, in place of the old tops of eight to twelve feet in height, which I had made into firewood and brush piles, a thicket of new shoots, more numerous than ever, appeared, and, besides, pleasant to behold, a marvelous quantity of young lemons in clusters at the ends, and in strings along the branches, as "thick as blackberries." I had evidently put my soil, water and labor to good use. These lower stories of my trees, with outspread

arms, gave promise of a crop several times as great as was borne by the same branches and the lofty tops together. The promise was the same in the parts that had been irrigated and the parts that had been dry the previous summer.

Of course, this old top was preparing fruit wood for other seasons, but the fruit would be high to reach, and subject to wind damage; and, as the tree was giving the greater part of its forces to wood formation, the lemons would be apt to mature and color, while remaining on the tree long enough to become of merchantable sizes.

I had obstructed nature's plans for the enlargement of the tree, and had turned her efficiencies to my advantage in fruit production, and it seemed plain that I should continue the treatment if I could do so without detriment to the tree.

**THE BORONIO METHOD.**—The time and occasion had come to take advantage of the theories and experience of others. I went to San Diego, interviewed Mr. Boronio and inspected his system of pruning. I found that he had taken his trees down to the lowest story; that is, he had left but one tier of out-growing branches, which my own experience could not but approve as a move in the right direction, except that he seemed to me to have gone too far for old trees. My work had made immediate use of nearly all of the fruit-wood already formed, which was sufficient in quantity for a large crop. The energies of growth in either case were directed to the side branches, which, in the one, burst at once into abundant fruitfulness, and, in the other, were prepared by skillful treatment for a similar result a few years later.

The Boronio method, while too radical and uneconomical for old trees, unless the soil and water be insufficient to maintain a greater bearing area, is surely an admirable method of training a young tree, for then all growth is directed from the first into a profitable channel. I am not prepared, however, to say from experience that growing a tree to a considerable size in a natural way and then removing the top and using the strength of the root system for fruit production is not a judicious method. The foliage of the fruiting branches seems sufficient to maintain a healthful condition.

**MR. LITTLE'S METHOD.**—In furtherance of my plan of observations I next went to visit Mr. Little's orchard of lemons in Ontario. Some years before an unwelcome stroke of Nature's hand, other than drouth, as was the case with me, had made it necessary for him to remove the damaged tops of his trees. The remainder proved to be of more value than the whole had been, for he was led to note the mode of growth and fruiting and put his knowledge to a practical use.

His trees have become broad and symmetrical, with well rounded tops, every branch a fruitful one, because all sky-tending shoots are suppressed. His soil, water, tillage and fertilizer are turned to a profitable use.

**THE LESSON.**—I needed to go no further to determine what would be the outcome of the plan I had begun. The great top of my trees was gone, and its loss was not to be deplored; the many aspiring little tops, too, must go, and not be tolerated hereafter. I had learned that these numerous little shoots, so persistent and troublesome to remove at first, in time gave up the contest in favor of the new regime of short, broad-leaved fruit branches.

While the whole is greater than any of its parts, it is not in this case greater in its productiveness, nor better than the part I have chosen to retain for the lemon-growing business; for it is observable that the trees which were vigorous and healthy before, are no less so now; while those that in a certain section of the orchard were affected with mottled leaf, have, to some extent, improved, and the quantity of good fruit on inferior trees has increased.

The quality of the fruit in general is evidently better than in the seasons when I permitted a top to grow. The reason for this is apparent; for a part of the lemons grew on shoots that had their origin on comparatively new wood, and so had the rank, coarse tissues of that wood; while lemons that grow on shoots that start directly from old limbs and branches of firm, compact structure themselves partake of the same character. As lemons become commonly grown on such wood the market appreciation of the fruit will increase.

The theory is the same in all plans of pruning the lemon, whether Boronio, open center, or cutting out from every part of the tree upward growing wood, or even in the old plan of annual shortening, namely, the determination of the vigor of root and leaf system to fruit production. Conditions exist which may render one plan more desirable than another; but the best crop results can not be obtained, when a tree is of fair size, while the sap is pursuing its natural tendency to build up the tree to a great height.

In removing the undesirable young growth it does not seem difficult to teach the pruner to distinguish between that and the growth to leave.

In the one sort, which is to be cut off close to its origin, the shoot is rank and angular and of short tissue; in the other, to be left to bear fruit, it is round and firm. On the one are narrower leaves of light green and larger thorns. Proper details of treatment will follow careful observation.

## ENTOMOLOGICAL.

### The Need of a National Horticultural Quarantine Law.

By ALEXANDER CRAW, State Horticultural Quarantine Officer, at the Fruit Growers' Convention.

The need of a national horticultural quarantine law for the protection of the horticultural interests of the United States is annually becoming more apparent. Foreign insects are spreading over the Eastern States. With national restriction at the time they were introduced, they could have been stopped at the port of entry. Once established in the country, they are rapidly disseminated by nursery stock and natural spread. Insects in their native country may not cause any appreciable damage to vegetation, but when introduced into a new country without their natural checks, they increase enormously.

"The estimated annual damage to agricultural and horticultural interests of the United States from the attacks of insect pests amounts to \$300,000,000, and at a low estimate at least one-half of this damage is done by imported insects." The above figures are from an official source and are certainly of sufficient importance to demand the serious attention of the National Government in providing measures to effectively exclude any further importations of this nature.

One orchard in North Carolina, containing 60,000 large bearing peach trees, was recently cut down and burned, because the trees were seriously infected with an imported scale. At a low valuation, those trees were worth at least \$150,000. Another orchard in Maryland of 20,000 peach trees was completely destroyed in two years. In other States the loss from this pest has been very serious.

Another scale insect pest that is likely to surpass the "pernicious San Jose scale" in destructiveness has been introduced into the United States. It is a small white scale (*Diaspis amygdali*). This scale succumbs to fumigation with hydrocyanic acid gas, but is proof against the best insecticide solutions at the ordinary strengths. When this scale is found on stock for California, it means the confiscation and destruction of the trees or plants. Unfortunately we have no authority to interfere with trees or plants for other States. We always notify Dr. L. O. Howard, of the United States Department of Agriculture, of such arrivals, and he notifies the proper State officials. In spite of these precautions this scale has secured a firm hold in some of the Eastern States. Prof. Fernald, of the Agricultural College, Amherst, Mass., reports that this scale has been found in five places in his State and in each case the infected trees were received from a nursery near Boston that imports direct from Japan. If a national horticultural quarantine law had been in force, the trees could have been destroyed here, or thoroughly fumigated before being forwarded.

In my current report to the State Board of Horticulture, I called attention to the report of W. M. Scott, of Atlanta, Georgia, regarding the seriousness of this scale in that State. In one orchard of 25,000 peach trees near Irby, 10,000 of them were in such condition that they had to be dug up and burned. Owing to the fact that this scale does not confine its attacks to fruit trees, but is found upon a great variety of trees, shrubs and ornamental plants, the danger of its introduction is much greater, and consequently it will be more difficult to exterminate where once introduced.

The existence of the disgusting "orange maggot" (*Trypeta ludens*) in our neighboring republic is well known. It is rapidly spreading in that country and if not carefully guarded against may reach California, Arizona, Florida or Louisiana, and inflict serious loss upon the orange growers of those States and the orange consumers in other States.

Mexico is not the only country that we have to fear, for we know of the existence of a similar pest infesting oranges in Fiji, Australia and Cape Colony. Maggots of a related species attack peaches in those countries.

Japan and our newly acquired Hawaii have a maggot that destroys 75% of the melon, cucumber and summer squash crop in the latter country. To be upon friendly terms with those countries, we cannot be expected to keep open door for such pests. The order (Diptera) to which those "fruit flies"—the parents of the above maggots—belong contains some of the most rapid breeding insects known.

**A NATIONAL LAW.**—Several attempts have been made to pass a national horticultural quarantine bill, but owing to conflicting interests of importers and dealers in the Eastern and Middle States, nothing more has been accomplished than calling attention of orchardists to the necessity for such a law. The first organized effort in this direction was at a meeting of horticulturists and entomologists held in the City of Washington, D. C., on March 5th and 6th, 1897. A bill was then drafted and was introduced in the Senate by the Hon. Stephen M. White of Los Angeles. This bill was endorsed by the State Fruit Growers in convention at Sacramento on November 18th, 1897, but it did not meet with the approval of the Eastern nurserymen and tree importers, and



another bill was drawn up by them at a convention held at St. Louis in June, 1897.

Finally a conference was agreed to by both the Washington and St. Louis committees and a compromise measure was drawn up. Possibly to give this bill some degree of endorsement from California, a Congressman from this State was selected to present it in the House of Representatives. The defects in the bill and its tendency to favor importers' interests against those of the grower were so apparent that I publicly attacked it through the press and at fruit growers' meetings. Another bill was drafted at the State Fruit Growers' Convention held at San Jose, December 12th to 15th, 1899. In this bill all reference to interstate commerce in trees and plants was eliminated, for the reason that it was considered safer for the States to which the stock was consigned to make the examination, as they are more vitally concerned as to its condition, and the work undoubtedly would be more carefully done than it would be at the point of shipment. In order to harmonize all interests, it was considered better to modify several sections of the original Senate bill. The San Jose bill conferred certain discretionary powers upon the Secretary of Agriculture that were acceptable to the members of the convention.

No decisive action has yet been taken by Congress upon such a bill, so I take the liberty of presenting the same bill drawn up by a committee at San Jose and which was endorsed by the State Fruit Growers in convention in that city. A similar bill met with the approval of fruit growers in convention at Sacramento, Los Angeles and Riverside. I hope that it will meet with your approval and be taken up by the fruit growers of the State and nation, individually and through their associations, exchanges, chambers of commerce and boards of trade. If each does his part, Congress will understand that we are in earnest and will grant the necessary protection.

The proposed law which Mr. Craw presented was approved by the convention and is now before Congress.

## THE POULTRY YARD.

### A Washington Grower's Methods.

The Oregon Agriculturist tells of the experience of H. L. Blanchard and wife, of Vancouver, in poultry keeping on a small scale.

During the past year they have kept about 200 laying hens. The number was a little larger than this in the early part of the year and became smaller in the latter part of the year, as they sold off hens. The hens kept for laying are Brown Leghorns and Black Minorcas. They also keep Plymouth Rocks. For the past year they kept an exact record of the cost of food and of the number of eggs and fowls sold and amount received. The food cost per hen was about 75 cents for the year, and the amount received for eggs, after paying for food, was approximately \$2.75 per hen. The food raised on the farm was charged up against the hens at a little higher price than that bought.

Their hens are provided with comfortable quarters. For each two dozen fowls is provided a roosting room fronting to the south, and well lighted, 8 feet wide and 12 feet deep, with shed roof 10 or 11 feet from the ground in front and 7 or 8 feet in rear. These roosting sheds are built in pairs, with a scratching shed, 12x30 feet, connecting them. The scratching shed is separated into equal parts by a lath or wire screen. On the floor of the roosting rooms they keep chaff from 2 to 4 inches deep. There are three roosts, each 8 feet long and all on a level in each roosting house. A dropping board is arranged on a slant with a cleat to catch droppings. The dropping board extends through the wall of the building that the droppings are easily drawn off the dropping board to the outside. The dropping board is kept covered with dry soil. The air in the roosting room is kept sweet and pure. Straw to the depth of a few inches covers the ground in the scratching room. All grain which is fed to the fowls in bad weather is scattered on this straw so that they must scratch for it. The exercise of scratching keeps them from getting too fat to lay. They do not allow their hens to get fat unless they are fitting the hens for market. Give the hen all she needs, but in such a way that she will use it for making eggs, not fat. A hen cannot make eggs when she is making feathers. In feeding, it is necessary to know first what food is required for making eggs. Then give the food in the proper proportions; in short, a balanced ration. Feed each breed separately. The Leghorn is naturally an active fowl, and the Plymouth Rock is not. Give the Leghorn a good feed and she will soon be out rustling around to find something more on her own account. Give the Plymouth Rock a good feed in the morning and she will wait around all day to see when you are going to give her some more. The Plymouth Rock should be fed enough in the morning to take the edge off of her appetite.

Mrs. Blanchard, for the morning feed of the fowls, takes the house scraps, some bran, a very little cornmeal and a little meat and heats it up in such a way

that it is fit food for a human being. She will not tolerate the feeding of carrion to the fowls. She gives them only a fair mess of feed in the morning. If the hens appear contented after have had their feed, it is a sign that they have had too much. At noon she takes a sheaf of wheat and scatters it about for them. When it is cold she feeds them a little of the sheaf wheat a number of times during the day, so as to keep them busy exercising, which prevents them from getting cold. In summer two feeds a day, are enough. At all seasons give a full meal at night, provided it is of the right kind. Mixed grains are best. In winter a little corn is useful to keep up the bodily heat of the fowls.

Fowls must have grit, and few people realize how much they need. For their fowls they haul a large wagonload every year, and it all disappears. Sharp gravel is best. Washed and rounded gravel is poor. The dust bath is very essential, and must be provided. It is nature's method by which a fowl keeps clean. It must be dry, powdery, road dust, not simply dry earth.

## FRUIT MARKETING.

### Convention of Fruit Growers on January 15.

Carrying out the instructions of the fruit growers' convention in this city two weeks ago, the committee on a general co-operative organization has proceeded with his work and Mr. M. Theo. Kearney, chairman, now issues a call for a convention of deciduous fruit growers to be held at Sacramento on Tuesday, January 15, 1891, in the Agricultural Pavilion, at 1 o'clock, for the purpose of organizing the California Fresh Fruit Growers' Association, to embrace all growers of deciduous fruits who dispose of the whole or a part of their crops for table use or canning. At the same time an opportunity will be given to those who dispose of any portion of their crops, as dried or cured fruit, to join the California Cured Fruit Association, whose headquarters are at San Jose.

DELEGATES INVITED.—It should be clearly understood that success can only be achieved through the earnest and united efforts of all the producers of deciduous fruits, therefore it is the duty of every man to arouse his neighbor to the importance and necessity of having a large attendance at the convention in Sacramento. As it is not expected that every fruit grower can attend they are requested to send delegates numbering from one to five from each school district where fruit is grown. These delegates are to be chosen at local meetings, and in order to save time and to promote thorough organization growers are requested to meet in their school houses (it being a holiday) or other places of meeting in their several school districts, throughout the State at 2 o'clock on Tuesday, January 1, 1901, for this purpose.

LOOKING TOWARD A GENERAL ORGANIZATION.—The committee, as instructed by the Fruit Growers' Convention, invites the industries of citrus fruit, walnut, almond, olive, raisin, cured fruit and fresh fruit growing to send one delegate each to a meeting to be held at the Palace hotel, San Francisco, on Tuesday, January 8, 1891, at 11 A. M., and trusts the invitation will be cordially accepted.

ADVANTAGES OF WIDE CO-OPERATION.—With these various affiliate industries properly organized we will have the basis for an association that will prove of incalculable benefit to the individual and to the State. It should be composed of one representative from each industry and should employ as manager a man of keen business integrity who can devote his whole time to the affairs of the association. The members of this association, or council, could be called together whenever necessary to pass upon important matters. If, for instance, the Fresh Fruit Association should have a grievance in the matter of transportation it would appeal to the council and after investigation the council could speak with the strength not of 6,000 to 8,000 carloads of freight, but with the added weight of 20,000 cars of citrus fruit and 20,000 to 40,000 cars of other fruit products. So also in the matter of tariff legislation. A council representing so large a voting population power would be listened to with care, and could speak from a thorough knowledge of the subject at issue.

PURCHASE OF SUPPLIES.—In the matter of purchase of fruit boxes and other supplies, large economies could be secured, and what is of greater importance the growers could be protected from unjust or extortionate charges by other combinations.

LABOR.—The assistance this council could render in providing cheap and reliable labor, which has become a grave problem to growers and packers, would be very great. What the laborer wants is constant employment. It is well known that fruits are harvested in California nearly every month in the year. The sugar beet growers require a great deal of manual labor at times before and after the principal fruit harvests. A well managed labor department in this association could throughout the year greatly assist in transferring labor to points where it is in demand. The laborers could

establish their homes wherever they found it most convenient and in thus providing constant employment we could safely invite a large increase in our population of a very desirable class, and we would then be much less dependent upon the labor of Chinese and Japanese. Through the various fruit organizations we could induce our growers to greatly improve their practice by providing suitable accommodations on their places for laborers. Then they would be far more successful in getting and holding good white labor, and at less cost than heretofore. With these necessary accommodations assured, thousands of willing men, women and children could be drawn from our cities in the harvest and vintage season who would find health and pleasure as well as profit in a couple of months' work in the glowing orchards and vineyards of this State.

MARKETS.—Another valuable department of this association would be a bureau of information concerning the markets of the world, and providing for a constant study of the means best adapted to increase the sale of our products.

COMBINATION OF DISTRIBUTORS.—The added cost involved in the rent, salaries, traveling expenses, profits and other expenses of hundreds of competing distributing establishments, where tens of non-competing agents would serve just as well, should be eliminated. It is not too much to hope for that a consolidation of all these distributing interests should be brought about, and if so, the producers would be great gainers in having an organization of trained business men of large experience to attend to the marketing of their products. If this organization should be employed to pack as well as sell the fruits, there would be an advantage in that, provided, of course, that it was done in a satisfactory manner and at a reasonable cost, for then there would be one packing and selling concern to deal with and it would receive and pack at its various packing houses throughout the State all kinds of fruits, and it would also be able to fill orders for assorted car loads of fruit and thus reach directly and cheaply many points of distribution not now reached by us.

PACKERS REPRESENTED IN THE COUNCIL.—This packing and selling agency, and the canning industry also should be represented in the council, for in many respects their interests are identical with those of the producers. Where the interests diverge, that is, in fixing the prices of the products and the charges for packing and selling, it may prove that a candid discussion of the subject over a council board by level-headed business men would result in far more good to the producers than if a more conservative and cautious policy were adopted.

EMINENTLY PRACTICAL.—In all this I see nothing that is not based upon sound business principles, and on lines that are in full accord with modern methods of concentration and cheapening the cost of the product to the consumer, while at the same greatly improving the quality of the article. All that is needed is confidence in ourselves, the exercise of American enterprise and vigor, and a dogged determination to succeed. Of course it should not be expected that an undertaking of such large proportions can be brought into perfect operation in a day, but we should have a clearly defined aim and should begin the work without delay.

### Rank in Population and Railway Mileage.

The following table shows the rank of the various States as regards population and miles of railroad operated within their borders:

| States.           | Popu-<br>lation. | Mile-<br>age. | States.             | Popu-<br>lation. | Mile-<br>age. |
|-------------------|------------------|---------------|---------------------|------------------|---------------|
| New York.....     | 1                | 7             | Maryland.....       | 26               | 39            |
| Pennsylvania...   | 2                | 2             | Nebraska.....       | 27               | 14            |
| Illinois.....     | 3                | 1             | West Virginia...    | 28               | 32            |
| Ohio.....         | 4                | 5             | Connecticut.....    | 29               | 44            |
| Missouri.....     | 5                | 9             | Maine.....          | 30               | 34            |
| Massachusetts...  | 6                | 33            | Colorado.....       | 31               | 16            |
| Texas.....        | 7                | 3             | Florida.....        | 32               | 20            |
| Indiana.....      | 8                | 11            | Washington.....     | 33               | 25            |
| Michigan.....     | 9                | 8             | Rhode Island....    | 34               | 49            |
| Iowa.....         | 10               | 4             | Oregon.....         | 35               | 36            |
| Georgia.....      | 11               | 13            | New Hampshire...    | 36               | 43            |
| Kentucky.....     | 12               | 23            | South Dakota....    | 37               | 26            |
| Wisconsin.....    | 13               | 12            | Oklahoma.....       | 38               | 47            |
| Tennessee.....    | 14               | 21            | Indian Territory... | 39               | 40            |
| North Carolina... | 15               | 19            | Vermont.....        | 40               | 45            |
| New Jersey.....   | 16               | 31            | North Dakota....    | 41               | 29            |
| Virginia.....     | 17               | 18            | Dist. of Columbia   | 42               | 50            |
| Alabama.....      | 18               | 17            | Utah.....           | 43               | 37            |
| Minnesota.....    | 19               | 10            | Montana.....        | 44               | 24            |
| Mississippi.....  | 20               | 28            | New Mexico.....     | 45               | 35            |
| California.....   | 21               | 15            | Delaware.....       | 46               | 48            |
| Kansas.....       | 22               | 6             | Idaho.....          | 47               | 41            |
| Louisiana.....    | 23               | 30            | Arizona.....        | 48               | 38            |
| South Carolina... | 24               | 27            | Wyoming.....        | 49               | 42            |
| Arkansas.....     | 25               | 22            | Nevada.....         | 50               | 46            |

THE metric system was legalized in the United States in 1866, but its use is not obligatory. A bill is now before Congress prescribing that from January 1, 1902, the metric system of weights and measures shall be the standard in the United States. Public inertia defers the adoption of the system, though its general use is inevitable, it being the most accurate, the simplest and the best.



## THE HOME CIRCLE.

"After All is Said and Done, Mother is the Only One."

Well, after all is said and done,  
Your mother is the only one—  
The only one in all th' land  
T' give a chap a helpin' hand,  
T' cheer him in the daily work  
Thet he's a-dyin' just t' shirk;  
Who says, whenever things go wrong,  
"Keep up, Si, 't will be done 'fore long."

Sometimes, when crops refuse to grow,  
No matter how I hoe 'n' hoe,  
'N' plow, 'n' rake, 'n' sow, 'n' weed,  
Jest so's the stock ken hev some feed—  
Well, pa comes roun' an' says, "Say, Si,  
I reek' thet crop's 'bout goin' to die;"  
An' brother Jim, who's ciftied,  
Says, "Really, has the fodder died?"  
An' Sue, who reads them romance things,  
Says, "Back to earth what old earth  
brings."

And then she hol's her hands 'n' looks  
Jest like the gals in novel books.  
But ma! Ah, mother comes along,  
Softly hummin' an ol' sad song,  
I drop th' hoe, I mop my brow—  
Ain't got no use fer sunshine, now—  
An' life is filled with sudden bliss,  
Fer ma has asked me fer a kiss;  
An' after that—well, I jest swear,  
I wouldn't change with a millionaire!

Some time ago, when Higgins' gal  
Was lookin' for a lifetime pal,  
An' when I went to church, why, she  
Wuz there, too, an' she winked at me;  
An' at one meetin', by her side,  
I says, "Liz, will yor be my bride?"  
'Fore I had time to make a guess  
She squeezed my hand and whispered,  
"Yes."

We talked 'bout flowers an' weddin' rings  
'N' cottage love, 'n' all them things,  
'N' how we'd live on honey drops  
On a farm that didn't need no crops.  
But something 'neath my Sunday vest  
Told me I loved my mother best.

Ah, mother's gettin' old an' gray;  
Some day, why, she'll be laid away  
Down in th' field by th' old mill stream,  
Where all the roses love to dream.  
An' when that happens, like ez not,  
The old farm 'll jest 'bout go to pot;  
We'd lose all hope of ma was gone,  
Fer she 'most runs the farm alone.  
Up with th' sparrers every morn,  
Callin' the chickens to their corn;  
She cooks a meal I wouldn't trade  
Fer the finest farmhouse ever made;  
She cleans th' house an' sets th' hen,  
An' shoos the pigs back to their pen;  
She feeds the cow, an' then she goes  
Inter th' house an' sews an' sews,  
An' bakes a cake, an' runs th' churn,  
An' gathers in th' wood t' burn;  
An' ef you say, "Ma, rest awhile,"  
She'll answer, with her old, sweet smile,  
"Child, I ain't tired a bit. Are you?"  
We can't rest when there's work to do."  
An', supper o'er, the chores all done,  
She hears our lessons, one by one,  
An' then she sees th' cat is fed,  
An' puts the children all t' bed,  
An' when th' family's tucked away,  
Then she, alone, kneels down to pray.

Yes, after all is said and done,  
Your mother is the only one.

—Robert Mackay in Success.

## The Apostacy of Dorothy.

A CHRISTMAS STORY OF PIONEER TIMES.

Written for the PACIFIC RURAL PRESS by ANNA WEST-WEBSTER.

"I'm a goin' to dream to-night of a great, big, green Christmas tree, all lighted up with wax candles, and hung full of striped candy, and nuts and popcorn, and dollies all dressed in red, and lots of people, and Santa Claus smilin' round, and ever so many little girls and boys, more'n this house full, all to get presents off the tree."

"An' drums, rub-a-dub-dub—don't Christmas trees have drums on them, Dolly?"

"Of course, for boys; don't interrupt me, Johnny. You can't 'member the Christmas trees way back in the States, but I can. So, I'll tell you all about it, an' we'll both dream, maybe."

The two listening women sitting in opposite corners of the wide, mud fireplace, knitted diligently their unspoken longings into the blue meshes of coarse yarn socks.

The prattle in the trundle-bed rippled merrily on. The younger woman fidgeted. At last, she spoke up, sharply.

"Do hush and go to sleep, children;

not a word more," she commanded, hoarsely, through unshed tears.

An hour more of silence and knitting, and the women rolled up their work, smothered the smoking, half-burnt backlog with ashes to keep fire, and crept silently into the one big bed the house afforded, beside the sleeping two-year-old baby, Frank.

No sociable clock chimed with silvery tongue the passing hours as these two kept silent vigil, for troubled thought had come and banished sleep; at ten they knew the hogs would noisily seek their sleeping quarters under the house; and, at midnight, or thereabouts, the clarion notes of old Brigham, in his harem wear by, would announce the turn of night.

"S'pose we give the children a Christmas tree, Eliza," spoke at length the elder woman from out the midnight silence. "It will break the monotony."

"A Christmas tree loaded with presents—law, yes! and perhaps we'll have a dinner of turkey, and a mincepie, and cranberry sass to top off with!"

"Oh, well, we can make the best of things. We can have roast pig. If you'll shoot it, I'll dress it. The last han'ful of dried apples I've hid away for company will do fer sass, and carrots and vinegar will make fruit for mince pies. It wont be a regular, old-fashioned Christmas dinner like we used to have way back in the States, but it'll be a heap better dinner than our pore boys 'll be a gettin' in the mountains, I'm 'fraid."

"I could make Dolly a uice rag baby, said the younger woman, rapidly coming under suggestion, if I had something for a frock."

"Take that red silk handkerchief that belonged to father."

"I was thinking of that—if you didn't care."

"We might as well use it that way as to keep it hid out o' sight. I'm just longing to see something pretty."

The morning before Christmas eve day dawned chilly and raw, with a drizzling rain. Eliza, or "Joe Simon's wife," as she was known throughout the country, dressed in a pair of buckskin trousers, fringed at the outer seams, that belonged to her absent husband, and an old army overcoat, crushed a shapeless felt hat over her thick, blonde tresses, mounted her pinto pony, and scurried over the hills to look after the sheep. When she returned, two hours later, trailing behind her at the pony's heels was, oh, joy of juveniles! the Christmas tree—a green and fragrant fir. At the foot of the big bed, near the middle of the room, they planted the Christmas tree; so close, that at night, when the trundle-bed was pulled out, two little brown heads slept under its beneficent and balmy branches, and the dreams sleeping, as well as waking, were all of Christmas festivities.

Once a week—and now it was the day before Christmas—mail day came, and somebody, usually Joe Simon's wife, on Pinto, went over the hills to the trail, two miles distant, for the mail deposited in a box, nailed into the crotch of a white oak tree by the mail carrier. Sometimes she met him and got a whiff of news from the outside world, but oftener he passed after dark, these short winter days.

To-day she missed him, but the package he had promised to bring her was there; the half pound of candy, some popcorn and two toy soldiers, all carried in his kind and capacious overcoat pockets from the nearest store, twenty miles away, along with lots of other miscellaneous stuff for the settlers along his route.

Yes, the package was there, but no letter. No news from the boys, whose wives these lonesome women were, left here to "hold the fort" among these dreary hills, while the men delved and dug for gold in the mountains hundreds of miles away. No letter for three months. It was so late in the season, now, they could not return. She must give up all hopes of seeing her husband for another year, but it would be so comforting to have a letter oftener. The mails were so irregular. A tear splashed on her hand, but she dashed it away, and turned the pony out of the trail to mount the hill that lay between

this valley and the next, where lived on his "section" their nearest neighbor, three miles down the river in the bend. She always climbed this hill when her duties called her in this direction, it was so comforting just to see somebody else's house and to see that they were not entirely alone in this big, wild, mountain world.

A rough and narrow valley lay before her. On either side rose rough and rugged rock-crowned sentinels, too large for hills and too small for mountains, great piles of rock that nature had left in the rough; more or less clothed with verdure, even in mid-winter and patches of evergreen trees between, while, far as the eye could reach, along one side of the valley at the foot of the frowning bluffs, ran the river, the noisy and turbulent Umpqua, now swollen by the continuous rain and out of its banks, and roaring and swashing over many feet of a higher, earlier, riverbed, whose tip-tilted rock bottom told the story of prehistoric and mighty convulsions.

As Joe Simon's wife reached the hill-top, her practiced eye swept the horizon and discerned far in the dim blue distance, rising straight and fine and blue as a knitting needle, a shaft of smoke from the top of a bald hill on the east. Her heart stood still—the opposite hill—yes, there was the same dread, sinister sign—another and another. Her heart beat fast and furious now. The house, was it there? She hardly dared to look. A few steps now, just beyond that tree, and Jim Williams' house would be in sight, that is, if there was any house there. For, the smoke on the hills was the signal for a rising among the Indians. The house, she couldn't see it; she looked wildly, wondering vaguely if she wasn't too excited to discern it. She paced her pony slowly along the hilltop. Good God! the house was gone! She was sure of it—sure of it! There was a great, black spot. It was so far away, she could make out nothing more. She turned and galloped homeward. What if she should look in vain for another house—her own—and find instead a great, black spot of smoking ruins? Her darling baby, her sister, the children! "Oh, my God! I can't endure it," she gasped, and slid from the saddle to her feet. "I must control myself." On her knees she went, among the dripping bushes, while the pony amiably waited and browsed.

A few moments of Gethsemane, and, upon that rigid, fear-stricken, up-turned face, a change came; the change inscrutable, wonderful, instantaneous, the passing from earth to heaven, from fear to the glory of victory that martyrs wear.

The shadows of night were fast blotting out the uncertain light of that short, cloudy, winter day, when Joe Simon's wife turned the pony over to the children to be cared for, and went to assist her sister with the milking. The mud was ankle deep in the corral, but it had forgotten to rain for a few moments, and the moon was making the best of its unwonted opportunities. By its dim and watery light the face of Eliza was revealed to her sister. She rose instantly from her stooping position.

"Well?" said she.

"Yes, the signals are out. Bald Butte, Knox Hill, Biscuit and Bunker."

"The soldiers'll be along soon, and escort us to the fort; to-morrow, perhaps," said sister Catherine.

"Perhaps." Joe Simon's wife laid her hand suggestively on the hilt of a sharp, dirk-like knife she always carried at her belt. Her sister nodded gravely and resumed her milking. By this, they sealed once more a solemn compact, never to be taken alive, they, nor their children.

"Please, mother, can't we light the Christmas tree?" implored three small but urgent voices for the twentieth time.

"It is growing late—nearly seven, as near as I can calklate. Shall we begin, Eliza?"

"Go and put on your new blue and red homespun frocks, children, and your white aprons."

"Oh, Aunt Eliza, can we? And our new shoes?"

"Yes, your new shoes, and your red hair ribbons."

"Oh, my! It's just like going to meetin'," exclaimed Dolly, ecstatically.

"We'd ought to have some devotional exercises, Eliza, don't you think, on a Christmas eve?"

"Of course, sister. You select some hymns and I'll read a part of a sermon of Wesley's, or a sam. I like sams best, don't you?"

"Read about the little Jesus and the shepherds by night," suggested Dolly.

"Of course, that is what we want."

She was feeling terribly absentminded and listening, listening; her heart was alive to the slightest sound outside, and the vision of the black spot where once stood the home of neighbor Williams cast a dead, weird shadow on her soul.

Was her courage deserting her? Her lips moved silently and her heart rose in prayer as she fell on her knees beside a certain mysterious old chest, unlocked, threw back its lid, and drew forth that wonderful creation of her own, a gorgeous rag doll, for Dolly—a big doll with a gaudy red silk dress and a lace-trimmed handkerchief, her wedding one, pinned round its neck; a doll with legs and feet, and white stockings and violet shoes, and four strings of many-colored beads dangling about its neck, and something on its head that might have been a hat, or a cap, or a butterfly. Anyhow, it was bright and pretty, and was surmounted with a waving red feather, plucked from Brigham's adornments.

Dolly was delighted, and jumped and danced for joy the moment she beheld the doll, which was just as soon as Aunt Eliza had smuggled her to the tree.

"I want to hug her just once, aunty, before you hang her on the tree," implored Dolly, as she clasped the rag baby to her little mother heart, and gazed fondly into those little indigo eye spots with very black ink eyebrow marks around them, and kissed those ruby lips, indicated by a broad pen sweep of beet juice.

"I shall name her Dorothy—my dear Dorothy—and she shall be baptized."

Watch, a great, spotted, stub-tailed dog, now rose hastily from his rug with a low growl, and sprang to the door. An instant of suspense—tense, terrible—then the frail clapboard door was crushed in, split into a hundred pieces, and their faithful protector rushed out to meet an immediate and heroic death.

Half a dozen savages, hideous in war paint and feathers entered, silent, observant, vengeful; their weapons at their sides, awaiting the signal of their teyee, Si. A wild, weird picture they made, as they ranged round the wall. The room was ablaze with light, for the pine knots were snapping and sparkling in the long, low fireplace. The Christmas tree, its slim, green fingers reaching the ceiling, was gay with colored paper cut in many fantastic shapes, in swinging baskets, with strings of snowy popcorn, little jets of sickly flame from the tallow dips, with here and there a stick of highly-colored candy, and the two gay, wooden soldiers for the little boys; and, at its foot, stood, undismayed, and quite unafraid, little Dolly, with her rag doll clasped closely in her arms.

She was pretty well acquainted with two or three of the uninvited guests; old Si, the chief, in particular, she had often fed, and prattled to, when he came begging round the door. Now, she held her dolly towards him for a grunt of admiration, but he took no notice.

"You don't know my dolly, Si; she's Dorothy, and I'm goin' to baptize her, like Father Wilbur baptized Aunt Williams's Hanner Ann at camp meetin'. I know how. Jest you hold her, Aunt Eliza!" and Dolly laid the doll across the trembling knees of the quiet, though terribly frightened woman, sitting, open hymn-book in hand, close under the Christmas tree. Dolly flew across the room to the water bucket, and returning with a tin eupful, proceeded without any ministerial credentials to perform the ceremony of baptism.

"Hold her up, Aunty. There, now; I baptize you, Dorothy," and she sprinkled the white cotton face liberally, "in



the name of the Holy Father and the ghosts, amen: let us pray."

Joe Simon's wife led, with true Methodist unction, her sister followed; the little ones joining in the Lord's prayer, as usual, at their family devotions. Then, a happy thought came to Eliza; a "special providence" sent it; she thought that she would render the Lord's prayer in a language intelligible to their enemy, whose superstitious nature she well understood.

"Nesika papa," she began, "klaksta mitlite kopa saghalie," (pray Si); but Si preserved a glum and sulky silence to the end. The prayer must have appealed to him, however, especially the clause in Chinook jargon, "Potlatch konaway sun nesika muckamuck." (Give us every day our food.)

When all rose from their knees, and the grand old melody, "Nearer My God to Thee," was borne to heaven on waves of children's sweet, strong voices, Dolly hung the newly-acquired neophyte on the tree, with the pious abjuration that "now, Dorothy being a baptized Christian, and a Methodist, she hoped she would always be good."

Ceremonial and mystery appeal to the untutored mind of man not less strongly than to the heart and imagination of his more highly civilized brother, and tyee Si and his warriors superstitiously interpreted the simple scene before them. Of the white man's God they had heard much, and to their sorrow. He was variously reported to have a home up in the heavens, and away, siah, toward the sunrise, in Washington. It was by his almighty power that the white man came and conquered, and could not be driven away.

This idol the white folks worshipped was the representative of the great god in the east. He was all-powerful, and it would be a great and mighty good for the Indians to possess him, and worship him, and then he would of course transfer his allegiance to the Indian.

So, old Si reached out his lean and scrawny brown fingers and gently disengaged Dorothy from the tree on which she hung; and then, oh, horrible to relate, he tucked her under his dirty old coat and vanished into the rain and the darkness, followed by his obedient braves.

"Oh, what are they going to do with Dorothy, mother?" exclaimed Dolly, amid tears and lamentations.

"They are going to make a heathen god of her," replied Joe Simon's wife, with ready comprehension.

And bitters Dolly wailed: "Dorothy is a baptized Methodist, and she's gone to be a heathen idol. Oh, my poor, dear Dorothy!"

## NICE BABY

All babies are "nice," to their mothers.

We all love children. Great big men, with hard hands, have soft hearts for helpless new-comers to earth with the smile of heaven fresh on their innocent faces. No man is too high or low, too proud or humble, too busy or idle, too good or bad, too great or small—except a few very small mean men—to throw up their hats at the sight of a plump little cherub; or to pity a thin one.

Plumpness and thinness are accidents. Nature is bountiful; parents want to be. Scott's emulsion of cod-liver oil corrects their mistakes.

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## Lyric of the Milkman.

Hustlin' out at four o'clock, sir, with a dozen cows to tend,  
How'd ye like to be the milkman?  
So chilly in the tie-up that your hands will scursely bend,  
Oh, don't ye sort of yearn to be the milkman?  
With the winter wind ki-hootin' round the corner of the barn,  
And ev'ry cow a-shiver and a-shake from stem to starn,  
It sets a chap to feelin' that he doesn't give a darn—  
And that's a sassy feelin' for a milkman.  
With a blizzard on the docket and the snow a-fallin' thick,  
How'd ye like to be the milkman?  
As stifled as a skeeter rolled inside a feather tick,  
Oh, don't you think it's fun to be the milkman?  
And out before it's daylight, with your nose a-turnin' blue,  
And findin', as you shovel, you're the first to flounder through,  
It makes you love your bus'ness and your neighbor, I tell you—  
Oh, this lovely, lovely job of bein' milkman.

—Lewiston Evening Journal.

## Typhus Fever.

Typhus fever is fortunately very rare in this country at the present day, although we even yet hear occasionally of cases in our large cities during the winter season. It used to prevail extensively in Ireland, and epidemics were often started in American seaport towns by importation of the disease in emigrant ships. It is said still to exist in Dublin, Liverpool and London to some extent, but Mexico is now its chief stronghold. Many cases occur every winter in Mexico City and elsewhere on the great central plateau of Mexico, and sometimes tourists from this country catch it there and bring it home with them.

The disease usually begins suddenly in the midst of apparent health, with a chill, prostration, severe pain in the head and limbs, and high fever; the pulse is rapid, the face flushed, the skin hot and dry, the mouth parched. An almost constant symptom is nose-bleed, which occurs on the third or fourth day of the disease, and another is constipation.

This disease has a characteristic eruption, which in the beginning resembles somewhat that of measles. It comes out in patches of a reddish or pink color, first on the chest and then on the rest of the body and the limbs. Later the color changes to a dusky purple.

The nervous symptoms are marked. They consist at first of headache and dizziness, but soon the patient falls into a stupor from which he can be aroused only with difficulty, or else he becomes delirious, muttering constantly to himself in a dull, confused way, or perhaps becoming violent and having to be restrained by force from doing himself injury.

The affection is probably a germ disease, although the microbe, if there is one, has not yet been discovered. It is pre-eminently a disease of human crowding, as the old names of ship fever and jail fever testify. It cannot thrive in the open air, and is never to be feared by those whose dwellings are flooded with fresh air and sunlight. Even those already seized with the fever are not infrequently saved if moved out of the hospital ward or bedroom and kept in tents, or actually in the open air with only a shelter supported on poles over the bed.

There is no specific remedy for the disease, which is a very fatal one. Open air, cleanliness and good nursing are the patient's only salvation.—Youth's Companion.

Ida—So the Van Biggs had their crystal wedding. I suppose everything was glass?

Maud—Yes, even the diamonds worn by the host and hostess.—Chicago Record.

Mistress—Mary, didn't I see you talking to the policeman this morning?

Mary—No'om; it was him talking to me.—N. Y. World.

## DOMESTIC ECONOMY.

### Domestic Hints.

**AN INEXPENSIVE PUDDING.**—Pour a cup of boiling water over a cup of suet chopped fine, and then add one cup molasses, one cup raisins, one teaspoonful soda. Spice and salt same as fruit cake; flour to make a stiff batter. Steam three hours.

**SUET PUDDING.**—A pudding with more fruit can be made with one cup of suet, chopped fine, one cup of molasses; one cup of sweet milk, three and one-half cups of flour, one and one-half cups of raisins, one cup of currants, and one teaspoonful of soda. Steam two hours in a dish or bag.

**WALNUT SALAD.**—Take California white walnuts and be sure that not a nut is used which looks as if it might not be perfectly good. Crack the nuts carefully, so that they will come out of the shell in perfect halves. From a bunch of celery take the white, tender stalks and cut them in small pieces. Line the salad bowl with crisp lettuce leaves. Mix the nuts and celery together, place them in a bowl, and pour plenty of good dressing over them.

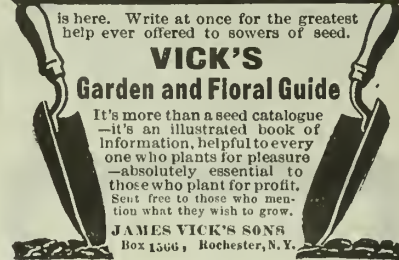
**ANOTHER ENGLISH PLUM PUDDING.**—Two pounds of raisins, two pounds of currants, two and a half pounds of flour, one and a half pounds suet chopped very fine, one pound candied citron, sixteen eggs, two cups sugar, one quart milk, one nutmeg grated fine. Beat the whites of eggs as for frosting and add last. Tie rather loosely in a strong cotton cloth and boil without ceasing for six or seven hours. Serve with sauce to suit the taste.

**ENGLISH PLUM PUDDING.**—Make a batter of four eggs, one pound of flour, one pint of milk, and a level teaspoonful of salt; add one teacupful of suet, chopped fine, one pound of raisins and one pound of currants. Stir all well together; tie in a cotton cloth; put into a kettle of boiling water and boil steadily four hours. Serve hot with lemon sauce or any kind of pudding sauce that is preferred. Boiled cider makes a very palatable addition to a sauce to be eaten with this pudding.

**WALNUT AND APPLE SALAD.**—Proceed as for walnut salad, using four tart apples, pared, cored and cut in cubes, in place of the celery. Do not cut the apples until a few minutes before the salad is to be sent to the table. Several varieties of salads may be made in this way, such as walnut and tomato, walnut and potato, or walnut and orange. For the latter, Navel oranges should be used, or if common oranges must do, every seed must be carefully removed. These salads may be garnished with fresh parsley and ornamented with blanched almonds.

**OLIVE AND EGG SALAD.**—Remove the shells from the number of hard boiled eggs desired, and beginning at the small end, cut the whites, almost to the base, into fifths lengthwise, removing the yolks. Turn back the petals thus formed so that they will curl prettily, and tint them a delicate pink with beet juice. Mash the yolks to a smooth cream, add chopped olives—half a cup

## Planting Time



to a half a dozen of eggs—and a teaspoon of paprika. Mould again into balls, return to the tinted petals, prick with a fork to roughen the surface, and place on each a tablespoon of mayonnaise. Set each in a nest of fringed endive. This is especially artistic, resembling pink blossoms with golden hearts.

**TOMATO JELLY.**—A tomato jelly which is delicious served with green salad and mayonnaise dressing is made as follows: Boil a quart of canned tomatoes twenty minutes with one bay leaf, six cloves, six pepper corns, one sprig of parsley and one slice of onion. At the end of that time strain the tomatoes through a sieve, return the liquid to a kettle and add two tablespoonfuls of tarragon vinegar, two tablespoonfuls of gelatine which has been softened in cold water and salt to taste. Stir until the gelatine is dissolved and turn into a mould. When it is firm and ready for use turn into a bed of crisp lettuce or watercress, and pour over it a mayonnaise dressing.

### Hints to Housekeepers.

Never steam a delicate pudding over a hot pot of onions, turnips or any other strong smelling vegetable.

In canning quinces and pears, steam until tender before adding them to the syrup. The same is true in preparing figs for cake filling.

If the oven gets too hot while you are baking cake or bread, put a basin of cold water in it instead of leaving the oven door open to cool it.

One can make a supply of good vinegar with very little trouble and expense. Put half a gallon of vinegar in a barrel and add five gallons of soft water and half a gallon of molasses. This will make vinegar in about three weeks. Stand the barrel on end, bore a hole in the top to admit the air and cover it with wire screening or cheesecloth to keep the bugs out.

Every well-regulated family should have a soup kettle. Into this go all bones, trimmings and bits both of meat and vegetables, and out of it comes a nutritious and easily digested food, suitable alike for invalids and children. Besides soup you may draw from this pot seasoning which will give flavor and richness to many dishes which are greatly improved by using stock instead of water or milk in their preparation. A case in point is spinach. If, after boiling and seasoning it, you rub it through a coarse sieve and add a cup of soup stock, you will not recognize that insipid vegetable.

Butter, eggs, cream and sugar all are necessary forms of nourishment, and all must enter into that perfect diet for which we strive. Butter subjected to great heat becomes acid; eggs under the same condition become hard and difficult of digestion. Yet we are constantly mixing these four ingredients together, baking and frying them, and expecting our overworked gastric juices to take care of them. The same principles apply to vegetables. Those that are simply cooked well, seasoned and daintily served answer best the purpose for which we use them.

Kind Old Man—Why are you crying, little boy?

Little Theodore—I only went to wish my sister many happy returns of her thirtieth birthday, and the mean old thing boxed my ears!—N. Y. World.

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## THE STABLE.

### Breaking Mules.

A Kentuckian gives the Orange Judd Farmer his method of breaking mules, as follows: I have handled a good many mules in the last few years, and broke many of them. First of all, I gentled them. I went into the stable containing a carload, being very careful not to frighten them,—found a gentle one, rubbed him on the nose, patted him on the back and neck, then gave a good currying on fore part of body. Before long others came around to see what was going on, and I soon had ten or twelve to work on. This was repeated every day, and often several times a day, as I fed them. When I sold them they were so gentle that I could go into the stable and halter them; the purchaser selling them in Atlanta as broke mules. I bought when colts and sold when two years old.


As to the best place to give Jack his first lesson, I prefer the turning plow, next the harrow. After you have settled Jack, slip on a strong bridle with a new half-inch rope 12 feet long, tied to inner ring of bit. Pass it under chin and through outer ring of bit, making a curb. Now lead Jack out of stable. As a general thing, he will come out swiftly. Let him pass full length of rope, then give him a quick, firm jerk, bringing his head toward you. Keep your eye on him, and, as he tries to make off, again repeat this. Remember that as long as his head is toward you you are safe and so is Jack; the reverse of this might be disastrous. Now lead him up and down the lot three or four times and put the harness on gently, rubbing him on the back. Lead around several times to get him used to the rattling of the harness. For this you will need a driver, as Jack might get mulish. Put on two lines and drive him around until he gets tired, teaching him "get up" and "whoa." It will be well to do this once or twice a day for several days before hitching to a plow.

You can now take him to the field, around which at least one furrow has been plowed. Work a gentle but brisk horse or mule in the lead. Hitch the lead animal in ready to start before beginning to hitch the green mule. Use a strong bearing stiek, with strong strings; this is apt to give you the most trouble—the strings breaking when the mule lunges, unless they are very strong. Have everything prepared beforehand. Tie a 4-foot rope to outer ring of bit, pass through inner ring and tie to inner chain of lead horse

several links from hames. This serves the double purpose of holding him back, and securing him should the bearing stick come loose. Last of all, hook the traces, inner one first, being sure everything is ready to start before hooking them. Step lively when hitching up a green mule, as he is likely to become impatient and get tangled in his harness.

Let one man hold him by the bridle, keeping him always in his place, and teach him where to walk—if a right-hand plow, in the furrow; if a left-hand, near the furrow. The other man gets behind the plow and takes the long rope in his right hand, the lead horse's line over his head, and guides him. Go this way for about an hour until Jack begins to lag. He is now broken, conquered, and one man can manage him. Work him this way half the morning, then take him out, water and feed him. About the middle of the afternoon hook him up again, the assistant helping start him off. This is all the work Jack should have in one day, but work him some each day. In four or five days he can stand a full day's work. If you have two to break, work them alternately, never putting two green mules together in a plow, wagon or harrow, but work them at one time beside an old soldier for about a week. Mare mules are, as a rule, gentler, harder and come to maturity quicker than horse mules.

Begin the mule's education early. As a colt halter-break him. As a yearling break him to a turning plow or harrow beside an old horse or mule, but at this age give him light work. It would be folly to put him to hard work just now, as he can not stand it. At two years break him to wagon, mower, binder or any other machinery. At this age he can stand a good deal of work. Your assistant should be a man who is not afraid to swing on to the mule and scuffle with him. My success lies, first, in having the green mule gentle, so that he has confidence in me; second, in keeping him always under my control; third, in teaching him exactly what to do. Whatever you teach him in breaking is apt to stay with him, so do not let him learn any mean tricks.



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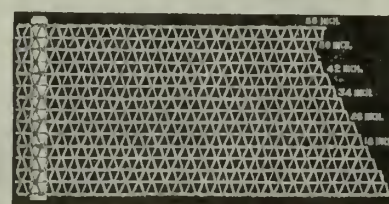
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FOR DESCRIPTIVE TREATISE, TERMS, ETC.,

Address B. CUSSICK, Agent,

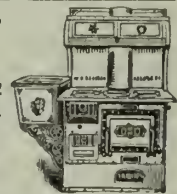
CHICO, BUTTE COUNTY, CALIFORNIA.

OLIVES ALFALFA ORANGES PEARS

\$50.00 RANGE FOR \$25.00

TO INTRODUCE OUR

TRIUMPH STEEL RANGE into every section of the United States, we will for a short time deliver at your depot free of charge our highest grade Steel range for \$35.00. The regular retail price is \$50.00. It has six 8-inch lids. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21 1/4 inches deep, and 15-gallon reservoir. Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet. Best Range made. WM. G. WILLARD, Manufacturer, 619 N. Fourth St., St. Louis, Mo. Will ship C. O. D. with privilege of examination.



## GLENN RANCH,

Glenn County, :::: California,

## FOR SALE

In Subdivisions.

This famous and well-known farm, the home of the late Dr. Glenn, "the wheat king," has been surveyed and subdivided. It is offered for sale in any sized government subdivision at remarkably low prices, and in no case, it is believed, exceeding what it is assessed for county and State taxation purposes.

This great ranch runs up and down the western bank of the Sacramento river for 15 miles. It is located in a region that has never lacked an ample rainfall, and no irrigation is required.

The river is navigable at all seasons of the year, and freight and trading boats make regular trips.

The closest personal inspection of the land by proposed purchasers is invited. Parties desiring to look at the land should go to Chico, California.

For further particulars and for maps, showing the subdivisions and prices per acre, address personally or by letter,

F. C. LUSK,

Agent of N. D. Rideout, Administrator of the Estate of H. J. Glenn, at Chico, Butte County, California.

## ATTENTION!

To close out, I offer for sale all my VINEYARDS and CITRUS LANDS, ALFALFA and STOCK RANCHES, OIL LANDS, HORSES and MULES (single or in carload lots). All must be sold. Call on or address

L. F. WARD, 537 So. F St., Fresno, Cal.

## CITRUS LANDS.

Also improved and unimproved vineyard, orchard, grain and alfalfa lands, and stock ranches.

—SOLD ON EASY TERMS BY—

C. R. SCOTT, TULARE, CAL.

## Mt. Campbell Orange Tract,

Six Miles N. E. of Reedley.

SOIL—Red dry bog.

WATER—Alta canal and reservoir.

LOCATION—Level or sloping mesa, sixty to eighty feet higher than river bottom adjacent.

FOR SALE IN

10 AND 20 ACRE TRACTS.

EASY AND LONG PAYMENTS.

W. N. ROHRER, FRESNO, CAL.

## Raisin & Fruit Land.

We are exclusive agents for 25,000 Acres of Choice Land in Fresno County.

For information in regard to any kind of land, write

SELMA LAND CO., SELMA, CAL.

W. T. MUGG & CO.,

make a specialty of selling good raisin vineyards. Correspondence solicited.

OFFICE, 943 J ST., FRESNO, CAL.

## Improved Fresno Scraper.

5-FOOT. WEIGHT, 300 LBS.

NEW STOCK. NEW PRICES.



HOOKE & CO.,

16 and 18 Drumm St., San Francisco, Cal.

GINSENG—Look all about it &c. Tell how to grow this great money maker. Write to-day. AMERICAN GINSENG GARDENS, Rose Hill, N. Y.



**Seeds, Plants, Etc.****Plant Evergreen Millet****FOR YOUR HOGS.**

One of the best feeds for Hogs. Grows anywhere without cultivation. Never runs out when once planted. Roots \$5.00 per 100 pounds.

For Sale by L. L. CROCKER, Loomis, Cal.

**TREES AND PLANTS.**

Good Assortment! Best Quality!

ADMIRAL DEWEY PEACH, Earliest Freestone. SULTAN, the Biggest Plum.

Send Us Your List and Let Us Price It.

LINCOLN NURSERIES, - NEWCASTLE, CAL.

**SUGAR PRUNE****GRAFTING WOOD.**

10c. per foot; less in quantity.

LEONARD COATES, NAPA, CAL.

**LOGANBERRIES!**

I offer a fine stock of Loganberries: one-year-old transplanted vines and rooted tips. Orders from the trade solicited. Write for prices.

ROBT. P. EACHUS, Lakeport, Cal.

MORRIS RED Apple,  
SUGAR Prune,  
CLIMAX Plum,  
CLAIRAC MAMMOTH

**TREES!**

A GENERAL  
ASSORTMENT  
OF  
NURSERY  
STOCK.

SEND FOR  
PRICE LIST.

Prune,  
PHILLIPS CLING Peach,  
MUIR Peach in  
Dormant Bud.

SUGAR PRUNE GRAFTING  
WOOD 5c PER FOOT.

FORESTVILLE NURSERIES,

T. J. TRUE, Proprietor.....Forestville, Cal.

**GENERAL ASSORTMENT**

— OF —

**FRUIT TREES.**

APPLES, PEARS, PEACHES,  
PLUMS, PRUNES, CHERRIES,  
APRICOTS, ETC.

MY STOCK IS EXTRA FINE THIS YEAR.

Send for Prices!

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**Nursery Trees****FOR SALE.**

JUNE BUDS OFF THE FOLLOWING VARI-  
ETIES, ONE FOOT UPWARD:

Muir, Lovell, Tuscan Cling, Levy Cling, Hatch's  
Golden Cling, Phillips Cling, Burbank's Sugar  
Prune, Climax Plum.

ONE YEAR OLD, THREE TO FOUR FEET:  
Sellers Cling, McDevitt Cling, Nicholls Orange  
Cling, Tuscan, Levy, Early Triumph.

SEND FOR PRICE LIST.

TREAT &amp; STEADMAN, BIGGS, CAL.

Every horticulturist should have my 28-page illustrated catalogue which tells all about

## Citrus Trees

The old sorts and the tested new sorts; also tables for planting trees, sowing seed, etc. Remember, I send this valuable book **Free!** Your address on a postal card brings one.

R. M. TEAGUE (established 1890), San Dimas, (Los Angeles Co.) Cal.

75,000 budded trees now ready for this season's trade.

**TREES! P. W. TREES!**

TREAT.

Nurseries in Contra Costa and  
Butte Counties.

Leading Varieties of Fruit and Nut Trees  
Write for Prices. Address  
214 CALIFORNIA ST.....SAN FRANCISCO.

**Something New!****THE CROCKER BARTLETT PEAR.**

Originated by L. L. Crocker, Loomis, Cal. Ripens about December 1st to 25th. It is preferable to the Original Bartlett. Better flavored; about the same size; very juicy and melting when ripe; high golden color, and very prolific bearer. Trees never overload themselves, although bear heavy every year. Very hardy. Will ship to England and back if required. It has stood the test for the past ten years. Samples of the fruit will be sent to any address, prepaid, on receipt of 25c. Switches for grafting at \$2.50 each; 3 for \$5.00. Large quantities at reduced rates.

L. L. CROCKER.....Loomis, Placer Co., Cal.

**FRUIT TREES.**

Eucalyptus, Cypress and Pine

**TREES.**

Vegetable, Flower and Tree

**SEEDS.**

Correspondence Solicited.

TRUMBULL & BEEBE,  
Seedsmen and Nurserymen,  
419-421 SANSOME ST., SAN FRANCISCO.

**SUPERIOR GRAFT STOCKS**

Bred for California Viticulture by  
T. V. MUNSON, Denison, Texas.

I OFFER FOR SALE

Rooted Cuttings of the following Hybrids:

AMERICA (male vine), RULRUP, SOLINRUP,  
and SOLRUPO.

All these are deep rooting, drouth and phylloxera  
resisting vines; grow readily from cuttings; take  
and carry the graft well.

PRICE: 15 Vines of any one kind for \$1.00.  
Per 100, \$5.00 f. o. b. San Jose.

NO CUTTINGS FOR SALE.

WM. PFEFFER,  
CUPERTINO, SANTA CLARA COUNTY, CAL.

**TREES!**

FULL ASSORTMENT OF DECIDUOUS  
FRUIT TREES.

Grape Vines and Cuttings,  
Berry Plants (LOGANBERRIES),  
Roses, Palms, and Ornamental Shrubs.

WE BENCH GRAFT

RUPESTRIS ST. GEORGE  
UNDER CONTRACT.

Write for Prices!

Napa Valley Nurseries,  
(Successor to Leonard Coates.) JOHN AMES, Prop.  
NAPA, CAL.

**SATSUMA or OONSHIU  
ORANGES**

On Citrus Trifoliata Stock.

The earliest variety and the hardiest stock.  
Tree thornless and fruit seedless. Also all the  
prominent varieties of Oranges and Pomeos on  
both Sour and Citrus Trifoliata stocks. A full  
line of fruits and ornamentals.

Correspondence Solicited. Catalogue Free.

GLEN ST. MARY NURSERIES,  
G. L. Taber, Prop.  
GLEN ST. MARY, FLORIDA.

**Fancher Creek Nurseries.**

We are growing. Our business demands it. On account of such liberal patronage in the past, and our well-established reputation, it was necessary for us to expand until we now have

**::: THREE NURSERIES. :::**

Ornamental Nursery and Experimental Farm is located 6 miles east of Fresno. Deciduous Trees and Grape Vine Nursery is located 2½ miles northwest of Fresno. Citrus Nursery at Exeter, Tulare Co., Cal.

THE LARGEST ACREAGE DEVOTED TO THE GROWING OF  
DECIDUOUS TREES AND GRAPE VINES, OLIVE, WALNUT  
AND FIG TREES, also Ornamental Trees (both Deciduous and  
Evergreen), Shrubs, Roses, Palms and Greenhouse Plants West  
of the Rocky Mountains.

**ORANGES, LEMONS AND POMELOS.**

There is no finer stock in the State than we have to offer. All the leading varieties. Trees are bright, clean and thrifty. Absolutely free from black and all other scale. The locality in which our trees are grown is practically frostless, hence we have no frosted cut-back trees for sale.

**Originators of the FAMOUS California Smyrna Fig.**

Sample 1-pound boxes of Dried Figs sent prepaid for 30cts.; 10 pound boxes \$1.25 f. o. b. Fresno. Illustrated Catalogue Free.

Write us for our "Recipe for Making Gold." It tells you all about our pulverized Sheep Manure as a fertilizer. Reduced prices on carload lots.

We want your business. Write us if you are in the market for anything in the nursery line.

Address... GEORGE ROEDING, Fresno, California.

**ORANGE COUNTY NURSERIES.**

WE CARRY A GENERAL LINE OF

**Deciduous and Citrus Trees and Ornamentals.**

**Large Stock** of Royal Apricot; Grafted Walnut; Yellow Newtown Pippin,  
Yellow Bellefleur and W. W. Pearmain Apples.

**Fine Trees** of Washington Navel, Thompson's Improved Navel and Valencia  
Late Oranges.

SEND FOR PRICE LIST.

RICHMAN & MILLS, Proprietors,  
FULLERTON, CALIFORNIA.

**THE FRESNO NURSERY.**

— I HAVE TO OFFER THIS SEASON —

**FRUIT TREES (Apple, Pear, Apricot, Peach,  
Prune, Almond, Etc.)**

Burbank's SUGAR PRUNE, CLIMAX PLUM,  
ROOTED GRAPE VINES,

ORNAMENTAL TREES, SHADE TREES, PALMS, ROSES, ETC.

♦ SEND FOR CATALOGUE AND PRICE LIST. ♦

Address F. H. WILSON, Prop. Fresno Nursery, FRESNO, CAL.

**RUPESTRIS ST. GEORGE.**

CUTTINGS FOR ROOTING,  
✻ ✻ \$5.00 PER 1000. ✻ ✻

JOHN SWETT & SON,  
MARTINEZ, CAL.

**California Fruits.****NEW EDITION (3rd)**

By E. J. WICKSON.

Professor Agricultural Practice University of California; Author of "California Vegetables in  
Garden and Field;" President California State Floral Society; Horticultural  
Editor Pacific Rural Press of San Francisco.

Large Octavo; 470 Pages; Profusely Illustrated, 12 Full-Page Plates.

The third edition of this great work and indispensable companion of progressive fruit growers is  
now ready for immediate delivery.  
The book has been practically rewritten by the author, and contains the latest and best methods  
of practice on the subjects of which it treats.

**Price \$2.50, Postpaid Anywhere.**

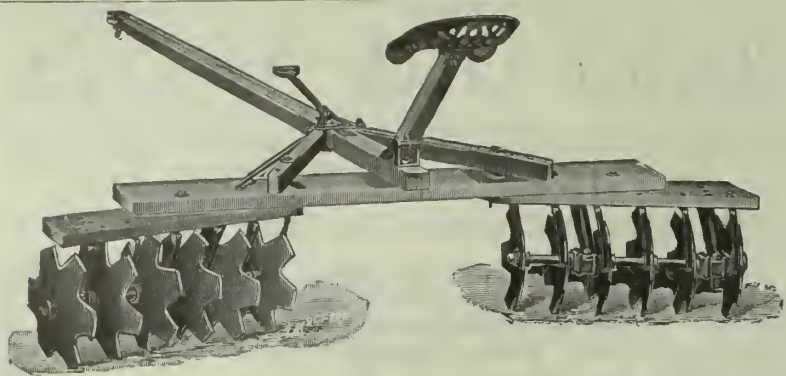
PACIFIC RURAL PRESS, Publishers,

330 Market Street, San Francisco, Cal.

**Dewey, Strong & Co., Patent Agents,**

330 Market Street, San Francisco, Cal.





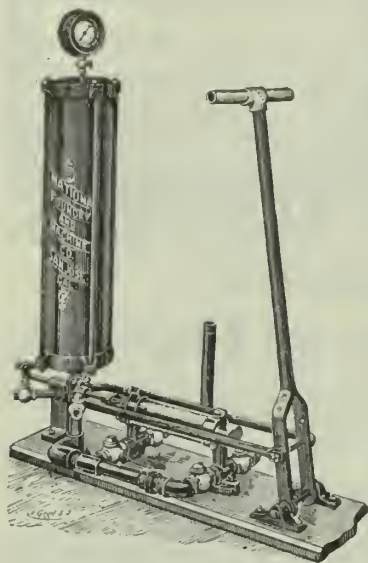
## Clark's Cutaway Disc Harrow.

REVERSIBLE. EXTENSION HEAD.

16-inch, 20-inch disks. 5-foot to 16-foot cut.

WRITE OR CALL.

ALLISON, NEFF & CO., 222 Mission Street, San Francisco.



## THE Menzel Spray Pump

is in the opinion of experts the  
BEST OF ITS KIND.

We build the Pump SINGLE and DOUBLE ACTING for HAND POWER. We are also prepared to furnish COMPLETE SPRAYING OUTFITS and GASOLINE ENGINES capable of working four sprays.

HOSE, NOZZLES and STRAINERS can be furnished as desired.

Send for Descriptive Circulars and Prices.

National Foundry & Machine Co.

Manufacturers of Castings, Forgings and Machinery,  
25 SOUTH RIVER ST.

SAN JOSE, CAL.

# P&B

## BUILDING PAPER

The walls of a house are built for protection. If the sun and weather open up the sheathing, the rain or the air will get in and cause discomfort and doctor's bills. To prevent this the architect or builder uses building paper. There are many kinds, but only two classes—the poor and the good. P & B PAPER is good—the best. It is very strong, odorless, waterproof and airproof, and will not rot. Ask your dealer for samples, or write us for them. We are the makers.

PARAFFINE  
PAINT CO.,  
San Francisco,  
116 Battery St.

## AN OLD SIEVE

with a crank on it would be just about as effective as the average milk tester after a few months' use. Why? Because there will be about as many holes in each. Tin is not the correct material of which to make milk testers.

## The NO-TIN Babcock Tester

as its name indicates, is made absolutely without tin or galvanized parts. It is made entirely of cast iron, steel and bronze. Should a bottle break and scatter the acid, there is nothing to rust. Gears are cut from solid phosphor bronze; they run easy and last always. Made in five sizes, holding 4, 6, 8, 10 and 12 bottles. Geared high—one revolution of the handle makes many revolutions of the test. All enclosed in solid cast iron frame. No danger of flying acid in breakage. Our shops repair all kinds of separators and dairy and creamery machinery promptly. Send for free catalog No. 70

ELGIN MFG. COMPANY,  
Elgin, Illinois.

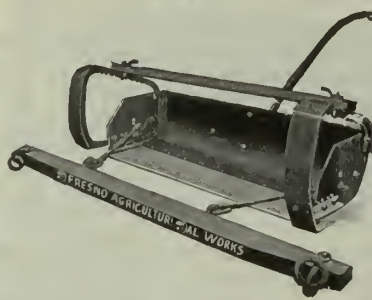


## MURIATE OF POTASH, SULPHATE OF POTASH,

For Sale by BALFOUR, GUTHRIE & CO., 316 California St., San Francisco.

## The Fresno Scraper.

3 1/2-4-5 Foot.



FRESNO AGRICULTURAL WORKS,  
FRESNO, CALIFORNIA.



We are the largest manufacturers of Steel Wheels and Truck Wagons in the World. Write for Catalogue. Havana (Ill.) Metal Wheel Co.

Telephone Main 199.

Blake, Moffitt & Towne,  
DEALERS IN PAPER,

Nos. 55-57-59-61 First St., San Francisco, Cal.  
BLAKE, MOFFITT & TOWNE, Los Angeles.  
BLAKE McFALL & CO., Portland, Or.

Two hundred bushels of potatoes remove eighty pounds of "actual" Potash from the soil. Unless this quantity is returned to the soil, the following crop will materially decrease.

We have books telling about composition, use and value of fertilizers for various crops. They are sent free.

GERMAN KALI WORKS,  
93 Nassau St.,  
New York.



MEYER, WILSON & CO., San Francisco, Cal.,  
are Sole Agents for the Pacific Coast.



## CENTRIFUGAL PUMPS

FOR

IRRIGATING or DRAINING.

We guarantee the efficiency and durability of our pumps.

BYRON JACKSON MACHINE WORKS, - SAN FRANCISCO, CAL.



## C. H. EVANS & CO., Machine Works,

183-185-187 FREMONT STREET,

Where, with Enlarged and Increased Facilities, they are better than ever prepared to do

First-Class Machine Work

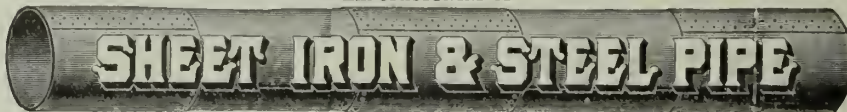
Promptly, and at Reasonable Prices, and will continue the manufacture of

Thomson & Evans Steam Pumps,

Deep Well Pumps, Power Pumps, Etc.,  
Also Marine Engines, Ship and Steamboat Work,  
Pipe Cutting, General Jobbing and Repairing.

## FRANCIS SMITH & CO.,

—MANUFACTURERS OF—



FOR TOWN WATER WORKS.

Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes.

46 FREMONT STREET, - - - SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with Asphaltum.

## Nitrate of Soda as a Fertilizer.

## SICK CROPS

—the faded out, yellow kind that are not doing well may be instantly revived by the application of a dressing of

NITRATE OF SODA.

It acts at once because it is very soluble. This makes it instantly available as plant food; 100 to 200 lbs. per acre is sufficient for most crops.

This is the most concentrated fertilizer on the market.

—FOR SALE BY—

BALFOUR, GUTHRIE & CO.,

316 California Street, - - - San Francisco, Cal.

Write to them for pamphlets.

## Farming, Fertility, Fortune.

ECONOMIZE by keeping your land in FULL CULTIVATION, and obtain HEAVY YIELDS by using

THOMAS' PHOSPHATE POWDER,  
(Basic Slag)

NOW IS THE TIME TO APPLY.

Unsurpassed as a Phosphate for Fruits, Grain, Potatoes, and Roots. Encourages the Growth of Clover, and Improves the Herbage Generally.

FINEST GRINDING AND ANALYSES GUARANTEED.

BALFOUR, GUTHRIE & CO.,

316 California Street, - - - San Francisco, Cal.

Write to them for pamphlets.



## Patrons of Husbandry.

### How to Advertise California Products.

By PROF. C. W. CHILDS at the Meeting of the San Jose Grange.

The most important question before the people of this valley at present is the marketing of this year's prune crop. Nothing would add more to the general prosperity of our people than the sale of this crop, at the price fixed by the Cured Fruit Association, within the next six months.

In what way can the sale of cured fruit be hastened and enlarged by advertising, and how shall we advertise? These pertinent questions our fruit growers are now discussing.

**PRUNES ARE HEALTHFUL.**—Cured prunes seem to be selling very slowly and many persons are fearful lest a large part of this year's crop may not be consumed before another crop is ready for market. We are anxiously inquiring why people do not seem to like cured prunes. Those who make prunes a part of their daily diet know how wholesome and nutritious they are, and how economically they may be prepared for use. Prunes are a reliable corrective of stomach ailments and no one who uses cured prunes, properly cooked, as a breakfast food, instead of the various oatmeal and wheat preparations, will be troubled with sick headache or chronic constipation. Invest more money in prunes and less in patent medicines.

Many people in our prune districts do not know how to prepare prunes for table use as a palatable food in the various forms in which it may be served. If there are people in this valley who are ignorant of the best way of tempting the palate with this valuable fruit, no wonder that many Eastern people do not seem to appreciate the need of prunes as a table food.

We believe that the consumption of prunes can be greatly increased in the United States by adopting some of the methods of advertising used by manufacturers of breakfast foods, soups, etc. Cured fruit is a manufactured article, and the same principles that govern the production and distribution of other manufactured articles apply to the production and sale of cured fruit. Compared with other manufacturers, we have spent but a small amount of money in exploiting our fruit products and we have reaped accordingly.

Now that nearly all the cured prunes are owned by the Cured Fruit Association, I suggest a trial of the following plan of advertising:

**A PRUNE CAR.**—Arrange a car, very much like the one known as "California on Wheels"; partition the car into departments so that one room may contain a sleeping berth, cooking stove, etc. Fill the other rooms with cured prunes. Get a man and his wife to take charge of the car and fruit. These people ought to be experts in cooking and otherwise preparing prunes for table use. They must be intelligent enough to address public meetings in the interests of the Cured Fruit Association, and to discuss with them the various phases and conditions of the fruit market.

Send this car East at once for a six months' trial, terminating with the exposition at Buffalo. For the first two or three months let Cincinnati be the center of operations, and the car may, from time to time, be taken to various towns in southern Ohio, Indiana and Illinois. This region has a great many Granges and Farmers' Clubs. In the spring the journey may be made through central New York, closing as stated with an exhibition of fruit at the Buffalo exposition. In each town a large grocery store or stores may be visited and the proprietors induced to allow prunes to be cooked in their stores and given to their customers. Recipes for cooking prunes and for the preparation of prune puddings and confections may be distributed among the

people in small packages of cured prunes. Granges and Farmers' Clubs ought to receive special attention, as these bodies of people are champions of co-operation and may be easily induced to give our fruit a trial.

**IT PAYS TO EXHIBIT.**—The State of California has appropriated a large amount of money for advertising her products at the expositions held in various parts of the world during the past ten years. Proof has been given that the money was profitably spent. Our fruit exhibits at these expositions have assisted materially in increasing the demand for the products of our orchards and vineyards. The State gave \$6000 to make an exhibit of our fruit at Hamburg in 1897. Mr. Filcher, who had charge of this exhibit, says that he daily cooked and gave away large quantities of cured fruit. He also gave away a large amount of cured fruit with recipes for cooking. As a result of this expenditure of \$6000 he thinks that we sold about \$150,000 worth of fruit during that year.

Now, if it pays to exhibit and to give away fruit to people who are away from home and who are interested in many other things in the exposition, how much more profitable will it be to visit people in their homes and call their attention to this one article—prunes. In order to have some data for determining whether the venture is profitable, reports might be obtained from merchants and other persons showing accounts of sales of cured prunes before and after these agents distributed prunes in their towns.

This object lesson advertisement ought not to be very expensive. The car would probably be taken to some point in the East and returned to California by the Southern Pacific Railroad Co. free of charge. The car could be attached to freight or passenger trains and moved from place to place at little cost. Some parties financially interested in the success of this scheme would probably take charge of the car at a small salary. Make it a thorough business affair and not a junketing trip.

Answers by Dr. Creely.

#### CONDITION POWDER FOR HORSES.

TO THE EDITOR:—Will Dr. Creely give a good condition powder for horse after influenza?—SUBSCRIBER.

Take gentian root, 4 oz.; elecampane root, 1 oz.; iron sulphate, 4 oz.; pulo Columba bark, 2 oz.; nitrate potash, 16 oz. Give a tablespoonful once daily.

## BLACK LEG ...VACCINE.

During the past two years our vaccines have been used on several thousand head of cattle in the worst infested districts of California and with the best of results, giving entire satisfaction and proving an exceedingly profitable investment to the stock owner.

Every lot is tested and found reliable before a single dose is put on the market.

Write for literature and testimonials.

— THE —  
**Cutter Analytic Laboratory,**  
BACTERIOLOGICAL DEPT.,  
FRESNO, CAL.



**JUST AS NATURAL** as the old hen and a good deal more reliable. Doesn't break its eggs or make its chicks lousy. Doesn't stay off the nest and allow the eggs to chill but hatches every egg that can be hatched.

**THE PETALUMA INCUBATOR**

Is absolutely perfect as to incubator essentials—proper application and distribution of heat and moisture, regulation and ventilation. For \$4 to \$24 eggs. WE PAY FREIGHT ANYWHERE in the U.S. Handsome catalog free. Petaluma Incubator Co., Box 217 Petaluma, Cal.



**SHOEMAKER'S POULTRY BOOK** on "Incubators and Almanac for 1901," 160 pages, over 100 illustrations of Poultry, Incubators, Brooders, Poultry Houses, etc. How to raise chickens successfully, their care, diseases and remedies. Diagrams with full descriptions of Poultry houses. All about Incubators, Brooders and thoroughbred Poultry, with lowest prices. Price only 15 cents. C. C. SHOEMAKER, Box 134, Freeport, Ill.

Coughs & Colds Cured with **R. Hall's Pulmonary Balsam**



### BARRED ROCKS:

Cockerels ..... \$1.00 to \$5.00  
Pullets ..... 3.00 to 5.00  
Trio ..... 9.00 to 12.00  
Eggs ..... 3.00 per setting.

### BUFF COCHINS:

Cockerels ..... \$3.50 to \$5.00  
Pullets ..... 2.50 to 4.00  
Trio ..... 8.00 to 11.00  
Eggs ..... 3.00 per setting.

### WHITE LEGHORNS:

Cockerels ..... \$4.00 to \$6.00  
Pullets ..... 3.50 to 5.00  
Trio ..... 10.00 to 14.00  
Eggs ..... 3.00 per setting.

Our birds are from the best of stock and have won highest prizes wherever shown.

**OAKLAND POULTRY YARDS,**  
Manufacturers of  
Pacific Incubator and Brooder,  
1317 Castro St. Oakland, Cal.  
Send for Catalogue.

## LARGE ENGLISH Berkshire Hogs.

FOR SALE, Some Extra Pigs of Either Sex.

Sired by Romford Duke XXVIII, 36115, and out of daughters and granddaughters of Black Knight 30063, the World's Fair sweepstakes winner. Romford Duke XXVIII, 36115, was sired by W. E. Spicer's great show hog Enterprise 27957. Also a few choice young sows bred for winter and spring litters.

WRITE FOR PRICES.

Address **JOS. P. KELLY,**  
Waddington, Humboldt Co., Cal.

### GOOD LITTLE INCUBATORS

Many people want a small incubator but don't want a mere toy, a plaything that will only spoil good eggs. To meet the demand for a really good little incubator we have perfected the now famous **Reliable 50 Egg Bantling Special**. It is the equal of any hatcher ever made, only smaller, and sells for only **\$5**. Send 10c for our 20th Century Catalogue and Poultry Book. Best ever published. **RELIABLE INC. & BROODER CO., Box B-91, Quincy, Ill.**

### Cocoanut Oil Cake.

THE BEST FEED FOR STOCK,  
CHICKENS AND PIGS.

For sale in lots to suit by

**EL DORADO LINSEED OIL WORKS CO.**  
208 California St., San Francisco, Cal.

### FOR SALE.

**5 PURE BRED Percherons**

(ONE HORSE AND FOUR MARES.)

Address **MRS. WM. B. COLLIER,** 2509 Pacific Avenue, San Francisco, Cal.

### THE NEW EGG FARM.

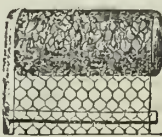
By H. H. STODDARD.

A practical, reliable manual upon producing eggs and poultry for market as a profitable business enterprise, either by itself or connected with other branches of agriculture. It tells all about how to feed and manage, how to breed and select, incubators and brooders, its labor-saving devices, etc. 12mo., 331 pp., 140 original illustrations, cloth. Price, \$1 postpaid.

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## S. F. Market Report.

## Produce Market.

SAN FRANCISCO, Dec. 26, 1900.

## CHICAGO WHEAT FUTURES.

Wheat futures in Chicago were as follows for the week named, price being per bushel:

|                | Jan.    | May.    |
|----------------|---------|---------|
| Wednesday..... | 69½@70¼ | 72¼@72½ |
| Thursday.....  | 70¼@70½ | 72½@73¼ |
| Friday.....    | 70¼@70½ | 73¼@72¾ |
| Saturday.....  | 70¼@70½ | 72¾@73¼ |
| Monday.....    | *—@—    | —@—     |
| Tuesday.....   | *—@—    | —@—     |

## LIVERPOOL FUTURES.

Prices of futures on No. 2 Red Winter per cental in Liverpool were as follows for the week:

|                | Jan.    | Mar.   |
|----------------|---------|--------|
| Wednesday..... | 5s 11¼d | 6s 0 d |
| Thursday.....  | 6s 0 d  | 6s 0¼d |
| Friday.....    | 6s 0¼d  | 6s 0¼d |
| Saturday.....  | 6s 0¼d  | 6s 0¼d |
| Monday.....    | *—s—d   | —s—d   |
| Tuesday.....   | *—s—d   | —s—d   |

## SAN FRANCISCO FUTURES.

The range of values on San Francisco Call Board for No. 1 White wheat per cental was as follows:

|                | May, 1901.  | Dec., 1901. |
|----------------|-------------|-------------|
| Thursday.....  | 1 03¼@—     | 1 03¼@1 08½ |
| Friday.....    | 1 03¼@1 03½ | —@—         |
| Saturday.....  | 1 03¼@—     | —@—         |
| Monday.....    | *—@—        | —@—         |
| Tuesday.....   | *—@—        | —@—         |
| Wednesday..... | 1 03¼@1 03½ | —@—         |

\*Holiday.

## WHEAT.

The greater part of the week has been devoted to holiday observances, leaving very little opportunity for the transaction of business. If there had been no holiday, it is doubtful if a great amount would have been accomplished. Conditions generally were not favorable for activity. Foreign markets showed weakness, with immediate offerings and the quantity afloat for Europe sufficiently large to give buyers abroad an easy feeling. Australia shipped 12,500 tons last week, being the equivalent of about five cargoes against none the preceding week. As Australia is one of our leading competitors in European markets, furnishing much the same kind of wheat, the effect on the local market was naturally not favorable to the producing interest. Shipments from Russia showed material decrease, being about 18,000 tons for the week, as against over 30,000 tons for preceding week, but there was more than enough of this class of wheat available for the immediate requirements of the importing countries of Europe. Farmers' deliveries in England were of fairly liberal volume, with prices for same declining, averaging the equivalent of about ¾ of a cent. per cental, or about 16 cents per long ton, lower than for previous week. There were two wheat cargoes cleared from this port for the week ending this date, also a mixed cargo for Liverpool, and 2000 tons went forward by steamer for South America.

## CALL BOARD PRICES.

On San Francisco Call Board prices for No. 1 White wheat per cental for the week were as follows for the options named:

|                                                                                                                |
|----------------------------------------------------------------------------------------------------------------|
| May, 1901, delivery, \$1.03¼@1.03½.                                                                            |
| December, 1901, delivery, \$1.08½@1.08¾.                                                                       |
| Wednesday, at regular noon session of Call Board, May, 1901, wheat sold at \$1.03¼@1.03½; December, 1901, —@—. |
| California Milling.....\$1 00 @ 05                                                                             |
| Cal. No. 1 shipping, alongside.....97¼ @ 98¾                                                                   |
| Oregon Valley.....97¼ @ 100                                                                                    |
| Washington Blue Stem.....1 00 @ 05                                                                             |
| Washington Club.....97¼ @ 02½                                                                                  |
| Off qualities wheat.....92¼ @ 95                                                                               |

Ocean freights and prices for wheat, as compared with a year ago, are as follows:

|                      | 1899-1900. | 1900-01.     |
|----------------------|------------|--------------|
| Liv. quotations..... | 6s2d@—s—d  | 6s2¼d@6s3d   |
| Freight rates.....   | 35@36¼s    | 38¼@—s       |
| Local market.....    | \$0 95@98¼ | \$0 97¼@1 00 |

The prices above are for spot lots of standard No. 1 California in Liverpool and for good to choice shipping in this city.

## FLOUR.

Shipments to Asia continue of good average proportions, the last steamer for China taking 15,715 barrels. Aside from above, however, the exports the past week have been light. Trade on local account was exceedingly slow, as is always the case at the close of the year. Quotable rates remained as before, but market lacked firmness.

|                                |             |
|--------------------------------|-------------|
| Superfine, lower grades.....   | \$2 25@2 40 |
| Superfine, good to choice..... | 2 50@2 75   |
| Country grades, extras.....    | 3 00@3 25   |
| Choice and extra choice.....   | 3 25@3 50   |
| Fancy brands, jobbing.....     | 3 50@3 65   |
| Oregon, Bakers' extra.....     | 2 75@3 15   |
| Washington, Bakers' extra..... | 2 75@3 25   |

## BARLEY.

With almost an entire suspension of

business during the greater part of the week under review, there has not been much chance for the development of new or noteworthy features. Values ruled fairly steady, buyers and sellers in most instances showing indifference. If there had been any special pressure to realize, however, current rates could not have been maintained. One full cargo of 3600 tons, partly Chevalier, was cleared for Europe. There is not much barley going aboard ship at present, and no great quantity of this cereal now offering which could be termed especially desirable for export.

|                                 |           |
|---------------------------------|-----------|
| Feed, No. 1 to choice.....      | 75 @—     |
| Feed, fair to good.....         | 70 @ 72¼  |
| Brewing, No. 1 to choice.....   | 80 @ 85   |
| Chevalier, No. 1 to choice..... | 97¼@1 03¼ |
| Chevalier, No. 2.....           | 85 @ 90   |
| Chevalier, poor.....            | 70 @ 75   |

## OATS.

Market shows firmness, more in consequence of the limited spot stocks and offerings, than of any active demand at prevailing values. While there is little probability of materially easier rates in the near future, prices are not apt to advance to any appreciable degree. The Government has been laying down Eastern oats at Pacific coast ports, for shipment to the Philippines, at less than cost of domestic product.

|                               |             |
|-------------------------------|-------------|
| White Oats, fancy feed.....   | 1 40 @1 45  |
| White, good to choice.....    | 1 32¼@1 37¼ |
| White, poor to fair.....      | 1 20 @1 27¼ |
| Gray, common to choice.....   | 1 20 @1 32¼ |
| Milling.....                  | 1 42¼@1 45  |
| Surprise, good to choice..... | 1 40 @1 45  |
| Black Russian.....            | 1 12¼@1 25  |
| Red.....                      | 1 15 @1 32¼ |

## CORN.

Not much arriving, either domestic or Eastern. For best qualities the market is showing steadiness, more particularly for Yellow. A large proportion of the California product is White corn, and much of the same now offering is not sufficiently seasoned to be desirable for storing.

|                                      |             |
|--------------------------------------|-------------|
| Large White, good to choice.....     | 1 17¼@1 20  |
| Large Yellow.....                    | 1 20 @1 22¼ |
| Small Yellow.....                    | 1 40 @—     |
| Eastern, in bulk (carload lots)..... | 1 10 @1 12¼ |

## RYE.

There are no changes to record in quotable values, but business is slow and of light volume.

|                          |          |
|--------------------------|----------|
| Good to choice, new..... | 87¼ @ 90 |
|--------------------------|----------|

## BUCKWHEAT.

Only moderate quantities in stock, and no excess of offerings is anticipated during the balance of the season. Values are being well maintained.

|                     |            |
|---------------------|------------|
| Good to choice..... | 1 80 @1 85 |
|---------------------|------------|

## BEANS.

Firmness continues to prevail in the local bean market, more particularly for white varieties and Limas, although values for colored kinds are being in the main well maintained at the quoted range. Business is not active, which is to be expected at this date. With the usual spring and summer trade, present supplies are likely to be all required. Conditions in Eastern centers warrant the firm figures current here.

|                                  |            |
|----------------------------------|------------|
| Pea, fair to good, 100 lbs.....  | 4 00 @4 25 |
| Small White, good to choice..... | 4 35 @4 50 |
| Lady Washington.....             | 3 50 @3 65 |
| Butter.....                      | 4 01 @4 50 |
| Pinks.....                       | 2 00 @2 25 |
| Bayos, good to choice.....       | 2 50 @2 75 |
| Reds.....                        | 3 00 @3 25 |
| Red Kidney.....                  | 4 00 @4 25 |
| Limas, good to choice.....       | 5 40 @5 50 |
| Black-eye Beans.....             | 2 75 @3 25 |
| Horse Beans.....                 | 1 75 @2 00 |
| Garbanzos, large.....            | 2 00 @2 25 |
| Garbanzos, small.....            | 1 25 @1 75 |

## DRIED PEAS.

Choice Green are in fair demand at quotably unchanged values, but no prospect of higher figures ruling soon, as current rates are slightly above the parity of prices East. Niles are quiet but not quotably lower.

|                             |            |
|-----------------------------|------------|
| Green Peas, California..... | 2 60 @2 75 |
| Niles Peas.....             | 1 85 @2 00 |

## WOOL.

The market is inactive, and is not likely to show any activity of consequence for the next few weeks, as most of the manufacturers and dealers will be occupied with their annual stock taking, and will be in no position to do buying. A little later on, however, a revival of trade is looked for, and at much the same range of prices as now nominally current. Manufacturers are, as a rule, very lightly stocked, and it is believed that they cannot very long postpone purchasing.

## SPRING.

|                                 |        |
|---------------------------------|--------|
| Humboldt and Mendocino.....     | 16 @17 |
| Northern, free.....             | 14 @15 |
| Northern, defective.....        | 12 @13 |
| Middle Counties, free.....      | 14 @15 |
| Middle Counties, defective..... | 11 @13 |
| Southern, 12 mos.....           | 8 @10  |
| Southern, free, 7 mos.....      | 9 @11  |
| Southern, defective, 7 mos..... | 8 @9   |

|                                      |        |
|--------------------------------------|--------|
| Oregon Valley, fine.....             | 17 @18 |
| Oregon Valley, coarse to medium..... | 16 @17 |
| Eastern Oregon, choice.....          | 13 @15 |
| Eastern Oregon, fair to good.....    | 10 @12 |
| Nevada, as to condition.....         | 11 @13 |

## FALL.

|                             |        |
|-----------------------------|--------|
| Humboldt and Mendocino..... | 11 @13 |
| Middle County.....          | 9 @10  |
| San Joaquin.....            | 7 @9   |
| San Joaquin Lambs.....      | 8 @9   |

## HOPS.

In quotable rates there are no changes to record, but the market cannot be termed firm. Fortunately for the producing interest, most of the last crop has passed out of first hands. Jobbers are still carrying considerable quantities, however, and whether or not they will be able to unload to their entire satisfaction is a question yet to be determined.

|                               |        |
|-------------------------------|--------|
| Good to choice 1900 crop..... | 13¼@16 |
|-------------------------------|--------|

## HAY AND STRAW.

The hay market has developed no changes worthy of special mention since date of last report. Business was not heavy, and while quotable values remained the same, there was no particular firmness observable. Some dealers predict an improved market after New Year's. "The wish is very likely father to the thought," on account of the tolerably heavy holdings in second hands. Straw is in light receipt and is selling fairly well.

|                    |            |
|--------------------|------------|
| Wheat.....         | 9 00@13 50 |
| Wheat and Oat..... | 9 00@12 50 |
| Oat.....           | 8 00@12 00 |
| Barley.....        | 7 00@9 50  |
| Volunteer.....     | 6 00@8 00  |
| Alfalfa.....       | 8 00@9 50  |
| Stock.....         | 5 50@7 00  |
| Compressed.....    | 9 00@13 00 |
| Straw, ¾ bale..... | 37¼@47¼    |

## MILLSTUFFS.

Only a moderate trade has been in progress in millstuffs of any description. Tendency on Bran and Middlings was to easier rates, but there was no quotable decline. Values on Rolled Barley and Milled Corn were fairly steady.

|                     |             |
|---------------------|-------------|
| Bran, ¾ ton.....    | 13 50@14 50 |
| Middlings.....      | 16 50@19 00 |
| Shorts, Oregon..... | 14 00@15 50 |
| Barley, Rolled..... | 16 50@17 00 |
| Cornmeal.....       | 26 00@—     |
| Cracked Corn.....   | 27 00@—     |

## SEEDS.

Mustard Seed is in too light stock to be quotable, and this is likely to continue to be the case during the balance of the season. Alfalfa seed is in slim supply, but no active demand for the same has yet developed. Should there be brisk inquiry, prices would likely very speedily harden. Bird seed market is quiet and without quotable change.

|                          | Per ctt.  |
|--------------------------|-----------|
| Mustard, Trieste.....    | —@—       |
| Mustard, Yellow.....     | —@—       |
| Flax.....                | 2 50@3 00 |
| Alfalfa, Utah.....       | 9 @9¼     |
| Alfalfa, California..... | 8 @8¼     |
|                          | Per lb.   |
| Canary.....              | 3¼ @ 4    |
| Rape.....                | 2 @ 2¼    |
| Hemp.....                | 3 @ 3¼    |

## BAGS AND BAGGING.

Spot business is insignificant in this line at present, and values remain nominally as previously quoted. Not much effort is being made at present to push Grain Bags to sale on contracts for next season's delivery.

|                                               |         |
|-----------------------------------------------|---------|
| Calcutta Grain Bags, buyer June-July.....     | 6¼ @ 6½ |
| Calcutta Grain Bags, spot.....                | 6 @—    |
| San Francisco Grain Bags, 22x36, spot.....    | 5¼ @ 6  |
| State Prison Bags in lots of 2000, ¾ 100..... | —@—     |
| Wool Sacks, 4 lbs.....                        | —@32¼   |
| Wool Sacks, 3½ lbs.....                       | —@28¼   |
| Fleece Twine.....                             | 7¼ @—   |
| Gunnies.....                                  | —@12¼   |
| Bean Bags.....                                | 4½ @ 5¼ |
| Fruit Sacks, cotton.....                      | 6¼ @ 7¼ |

## HIDES, PELTS AND TALLOW.

There is no improvement to note in the Hide or Pelt market, both being slow and rather weak at the quotations. Tallow is meeting with moderate custom at same figures current for some weeks past.

Only select hides, clean and trimmed, can be relied on to bring full figures. Culls of all kinds, either from grubs, cuts, hair slips, side brands or murrain, are not always readily placed at the lower quotations.

|                                     | Sound.     | Culls. |
|-------------------------------------|------------|--------|
| Heavy Steers, over 56 lbs.....      | 10 @ 9     |        |
| Medium Steers, 48 to 56 lbs.....    | 9 @ 8      |        |
| Light Steers, under 48 lbs.....     | 8 @ 7      |        |
| Heavy Cow Hides, over 50 lbs.....   | 8¼ @ 7¼    |        |
| Light Cow Hides, under 50 lbs.....  | 8 @ 7      |        |
| Wet Salted Kip.....                 | 9 @ 8      |        |
| Wet Salted Veal.....                | 9 @ 8      |        |
| Wet Salted Calf.....                | 10 @ 9     |        |
| Dry Hides.....                      | 15¼ @ 12¼  |        |
| Dry Kip and Veal, 11 to 16 lbs..... | 15 @ 13    |        |
| Dry Calf, under 4 lbs.....          | 16 @ 13    |        |
| Salted Horse Hides, large.....      | 2 50 @—    |        |
| Salted Horse Hides, medium.....     | 2 00 @—    |        |
| Salted Horse Hides, small.....      | 1 00 @—    |        |
| Dry Horse Hides, large.....         | 1 75 @—    |        |
| Dry Horse Hides, small.....         | 1 00 @1 50 |        |
| Dry Colts' Hides.....               | 50 @—      |        |
| Pelts, long wool, ¾ skin.....       | 75 @1 00   |        |
| Pelts, medium, ¾ skin.....          | 60 @ 75    |        |

|                                |          |
|--------------------------------|----------|
| Pelts, short wool, ¾ skin..... | 30 @ 50  |
| Pelts, shearing, ¾ skin.....   | 10 @ 25  |
| Deer Skins, best summer.....   | 35 @—    |
| Deer Skins, good medium.....   | — @ 30   |
| Deer Skins, thin winter.....   | — @ 10   |
| Elk Hides.....                 | 10 @ 12  |
| Tallow, good quality.....      | 4 @—     |
| Tallow, No. 2.....             | 3 @ 3¼   |
| Goat Skins, perfect.....       | 30 @ 37¼ |
| Goat Skins, damaged.....       | 10 @ 20  |
| Kid Skins.....                 | 5 @ 10   |

## HONEY.

Values are steady, with little or no probability of there being any changes of consequence in quotable rates during the balance of the season. Spot supplies are of very moderate proportions, but no large quantities are required to satisfy the demand at full current figures.

|                              |           |
|------------------------------|-----------|
| Extracted, White Liquid..... | 7¼ @ 8    |
| Extracted, Light Amber.....  | 6¼ @ 7¼   |
| Extracted, Amber.....        | 5¼ @ 6¼   |
| White Comb, 1 lb frames..... | 13 @ 14   |
| Amber Comb.....              | 11¼ @ 12¼ |
| Dark Comb.....               | 8 @ 9     |

## BEESWAX.

Very little now coming forward, and the quantity in store here is light. Market is firm at the quotations.

|                                  |         |
|----------------------------------|---------|
| Good to choice, light, ¾ lb..... | 26 @ 28 |
| Dark.....                        | 24 @ 25 |

## LIVE STOCK AND MEATS.

Market is very firm for Beef. Some choice Christmas stock brought the customary advance over quotable rates. Mutton is in very good request at steady figures, and nothing to warrant anticipating the development of any weakness in the near future. Choice Lamb was salable to advantage, being in light receipt. Veal was in fair supply and sold at a slight decline. Tendency on Hogs was to more firmness, especially on most desirable packing stock.

|                                             |          |
|---------------------------------------------|----------|
| Beef, first quality, dressed, net ¾ lb..... | 7¼ @ 8   |
| Beef, second quality.....                   | 7 @ 7¼   |
| Beef, third quality.....                    | 6 @ 6¼   |
| Mutton—ewes, 8½@9c; wethers.....            | 9 @ 9¼   |
| Hogs, hard grain fed, medium.....           | 5¼ @ 5½  |
| Hogs, small, fat.....                       | 5¼ @ 5½  |
| Hogs, large, hard.....                      | 5¼ @—    |
| Hogs, feeders.....                          | 5 @ 5¼   |
| Hogs, country dressed.....                  | 6¼ @ 7   |
| Veal, small, ¾ lb.....                      | 8 @ 9¼   |
| Veal, large, ¾ lb.....                      | 8¼ @—    |
| Lamb ¾ lb.....                              | 10 @ 10¼ |

## POULTRY.

Turkeys received the bulk of attention, as is invariably the case Christmas week. Eastern Dressed were in liberal receipt, and went at easy figures, selling mainly within range of 12¼@14c. California Dressed Turkeys were not offered freely and met with a moderately firm market at 14@16c, a few very select commanding an advance on latter figure. Live Turkeys sold mainly at 13@15c, with no excess of offerings. Trading in other poultry was light and at no appreciable changes in quotable rates from figures of preceding week.

|                                   |            |
|-----------------------------------|------------|
| Turkeys, live hens, ¾ lb.....     | 12¼ @ 13   |
| Turkeys, live gobblers, ¾ lb..... | 12 @ 12¼   |
| Turkeys, Dressed, per lb.....     | 14 @ 17    |
| Hens, California, ¾ dozen.....    | 3 00 @4 50 |
| Roosters, old.....                | 3 50 @4 00 |
| Roosters, young (full-grown)..... | 4 50 @5 00 |
| Fryers.....                       | 4 00 @4 50 |
| Broilers, large.....              | 3 50 @4 00 |
| Broilers, small.....              | 3 00 @3 50 |
| Ducks, old, ¾ dozen.....          | 3 00 @4 00 |
| Ducks, young, ¾ dozen.....        | 4 50 @6 00 |
| Geese, ¾ pair.....                | 1 75 @2 00 |
| Goslings, ¾ pair.....             | 1 75 @2 00 |
| Pigeons, old, ¾ dozen.....        | 1 00 @—    |
| Pigeons, young.....               | 1 75 @2 00 |

## BUTTER.

While market did not display any noteworthy firmness, there was more stability to values than during preceding week, especially for strictly choice to select fresh, such being in very good request, as is generally the case Christmas time. Defective qualities met with slow sale at generally low and irregular prices, the same having to come into competition with held and packed butter, of which there are liberal quantities still offering.

|                                           |        |
|-------------------------------------------|--------|
| Creamery, extras, ¾ lb.....               | 27 @—  |
| Creamery, firsts.....                     | 25 @—  |
| Creamery, seconds.....                    | 23 @—  |
| Dairy, select.....                        | 23 @24 |
| Dairy, firsts.....                        | 21 @22 |
| Dairy, seconds.....                       | 19 @20 |
| Dairy, soft and weedy.....                | — @—   |
| Mixed store.....                          | 14 @16 |
| Creamery in tubs.....                     | 20 @21 |
| Pickled Roll.....                         | 20 @21 |
| Firkin, California, choice to select..... | 30 @21 |
| Firkin, common to fair.....               | 17 @18 |

## CHEESE.

Firmness is as fully pronounced as previously noted, stocks being light and demand good. Especially is the market favorable to sellers for mild-flavored new of high grade.

|                                   |         |
|-----------------------------------|---------|
| California, fancy flat, new.....  | 13 @—   |
| California, good to choice.....   | 12 @12¼ |
| California, fair to good.....     | 11 @12  |
| California Cheddar.....           | — @—    |
| California, "Young Americas"..... | 12 @14  |

## EGGS.

There have been sharp declines in values the past week, both buyers and



sellers having little or no faith in the future of the market, and not caring to carry any heavier stocks into the new year than absolutely necessary. Eastern eggs were in free receipt, mostly cold storage stock, the same being crowded to sale at comparatively low figures.

California, select, large, white and fresh. 34 @—  
California, select, irregular color & size. 30 @32½  
California, good to choice store. 26 @29  
Eastern, as to section and grading. 24 @29  
Eastern, cold storage. 22 @24

## VEGETABLES.

Onions were in light receipt and mostly in few hands, with market firm at about same range of values last quoted. There was no great display of Winter vegetables of any sort, and for best qualities the market was in the main rather favorable to sellers. Fresh vegetables were in increased receipt, mostly from Los Angeles district, but they brought as a rule good figures.

Beans, String, # lb. 10 @ 15  
Beans, Wax, # lb. — @ —  
Beans, Lima, # lb. — @ —  
Cabbage, choice garden, # 100 lbs. 1 00 @ 1 25  
Cauliflower, # dozen. 50 @ —  
Cucumbers, Bay, # box. 50 @ 75  
Egg Plant, # lb. 10 @ 15  
Garlic, # lb. 3½ @ 5  
Mushrooms, Wild, # lb. 8 @ 12  
Mushrooms, Buttons, # lb. 15½ @ 20  
Onions, Yellow Danver, # cental. 1 75 @ 2 00  
Peas, Sweet, garden, # lb. 7 @ 10  
Peppers, Green Chile, # box. 40 @ 75  
Squash and Pumpkin, # ton. 8 01 @ 12 00  
Rhubarb, # lb. 6 @ 8  
Tomatoes, # crate. 1 25 @ 1 75

## POTATOES.

As compared with the demand, there were fairly liberal supplies, especially of other than strictly fancy stock, and for the average run of offerings the market presented an easy tone. Prospects at the moment do not appear favorable for any very marked improvement in prices during the balance of the season. Sweet potatoes were in sufficient supply for all immediate needs and were offered at easy rates.

Burbanks, River, # cental. 30 @ 60  
Burbanks, Petaluma-Tomales. 35 @ 60  
Burbanks, Salinas, # cental. 85 @ 1 15  
Burbanks, Oregon, # cental. 55 @ 90  
Sweet Potatoes, Yellow, # cental. 40 @ 90

## The Fruit Market.

## FRESH FRUITS.

The display of fresh deciduous fruits is now confined principally to Apples, stocks of which are fairly liberal, especially of other than strictly fancy, four tiers to the box. Of the latter sort there is about enough to satisfy the demand at extreme prices. Sales at \$1.25 per box or higher are the exception and confined to fruit which is about faultless in every respect, besides being of the most favorite varieties. Sales are mainly within range of 50c@\$.1.00, some choice stock going at latter figure. There are a good many Apples of common quality on market which will not command 50c per box. Poor stock is, in fact, more difficult to place at the lower rates than is fancy at top figures. There were limited quantities of Winter Nellis Pears offering out of cold storage, and these moved slowly at the tolerably stiff prices asked. Persimmons are almost out of market, and not many have been lately required to satisfy the inquiry for this fruit. A few Strawberries arrived, but their condition was not what could be termed choice.

Apples, fancy, 4-tier box. 1 25 @ 1 50  
Apples, good to choice, # 50-lb box. 65 @ 1 00  
Apples, common to fair, # 50-lb box. 25 @ 50  
Apples, Lady, # box. 1 25 @ 3 00  
Grapes, Verdel, # box. — @ —  
Raspberries, # chest. — @ —  
Pears, Winter Nellis, # box. 60 @ 1 25  
Pears, common kinds, # box. 40 @ 75  
Persimmons, # box. 40 @ 75  
Strawberries, Longworth, # chest. — @ —  
Strawberries, Large, # chest. — @ —

## DRIED FRUITS.

Market for cured and evaporated fruits has been virtually lifeless since date of last review, as was to have been anticipated for Christmas week. Values are necessarily almost wholly nominal, and that there will be any special revival of trade or noteworthy changes in conditions for several weeks to come is not probable. Most dealers will be mainly engaged for about a fortnight in their annual stock taking, settling up affairs of the old year, and casting balance sheets. Holders who insist on realizing at present find it necessary to accept lower figures than are nominally current. Stocks of nearly all kinds of dried fruits are still sufficiently liberal to admit of wholesale transactions, Apricots being about the only noteworthy exception.

## EVAPORATED OR BLEACHED.

Apricots, Royal, prime. 6½ @ 7  
Apricots, Royal, choice, in sacks, # lb. 7½ @ 8  
Apricots, Royal, fancy. 9 @ —  
Apricots, Moorpark. 9½ @ 11½

Apples, in 50-lb boxes, rings, pressed, fancy. 5¼ @ 5½  
Apples, 50-lb boxes, rings, pressed, good to choice. 3½ @ 4½  
Figs, White, fancy pressed. 6 @ 7  
Nectarines, # lb. 4 @ 6  
Peaches, unpeeled, fancy. 6 @ 6½  
Peaches, unpeeled, choice. 4½ @ 5  
Peaches, peeled, in boxes. 11 @ 14  
Pears, unpeeled Bartlett's, halved, fancy. 5 @ 6  
Pears, halved, unpeeled Bartlett's. 3½ @ 4½  
Pears, quartered, unpeeled Bartlett's. 3½ @ 4½  
Plums, Black, pitted. 4 @ 5  
Plums, White and Red. 5 @ 6  
Prunes, Silver. 4½ @ 6

## COMMON SUN-DRIED.

Apples, sliced. 2 @ 3  
Apples, quartered. 2 @ 3  
Figs, Black. 1½ @ 2  
Figs, White. 2½ @ 3  
Peaches, unpeeled. 3 @ 5

Prices for 1900 crop Prunes, as named by the California Cured Fruit Association: Santa Clara, four sizes, 3c. per lb.; 40-50s, 7c.; 50-60s, 5½c.; 60-70s, 3½c.; 70-80s, 3¼c.; 80-90s, 2¾c.; 90-100s, 2¼c.; 100-120s, 2c., which is the uniform price for this grade; Sonomas, other than smallest, ½c. less; other districts, ¼c. less, except for smallest; Ruby, ¼c. premium.

## RAISINS.

There is no movement of consequence at present. The official card rates of the Growers' Association as previously reported remain in force. Advices from Eastern centers report supplies on hand light, but no desire to stock up ahead to any great extent at present.

## F. O. B. FRESNO DELIVERY.—CARLOAD LOTS.

Imperial Clusters, 6-crown, # 20-lb box. 3 00 @—  
Dehesa Clusters, 5-crown. 2 50 @—  
Fancy Clusters, 4-crown. 2 00 @—  
London Layers, 3-crown, # box. 1 60 @—  
do do 2-crown, # box. 1 50 @—  
(Usual advance for fractions.)

Loose Muscatel, 4-crown standard, # lb. — @ 7  
Loose Muscatel, 3-crown. — @ 6½  
Loose Muscatel, 2-crown standard. — @ 6  
Loose Muscatel, seedless. — @ 6½  
(Above prices for loose raisins are for 50-lb boxes.)

Thompson Seedless.—Bleached fancy, # lb., 12c; choice, 11c; standard, 10c; prime, 9c. Unbleached 7½@9c.

Sultanas.—Bleached fancy, # lb., 10¼c; choice, 9¼c; standard, 8¼c; prime, 8c. Unbleached, 7@8c.

## CITRUS FRUITS.

While there was a fair movement in Oranges, it was hardly up to the average for the mid-Winter holiday season. Supplies were more than ample for requirements and market was easy in tone, quotations remaining about as last noted. Lemons were offered at generally unchanged rates, with supplies fairly liberal and demand light.

Oranges—Navel, # box. 1 25 @ 2 50  
Valencia, # box. — @ —  
Seedlings, # box. 1 00 @ 1 50  
Tangerines, # box. 75 @ 1 50  
Grape Fruit, # box. 1 25 @ 2 25  
Lemons—California, select, # box. 2 25 @ 2 50  
California, good to choice. 1 50 @ 2 00  
California, common to fair. 75 @ 1 25  
Limes—Mexican, # box. 4 00 @ 4 50  
California, small box. 50 @ 75

## NUTS.

No changes to record. Almonds are meeting with very little inquiry and market lacks firmness. Walnut market shows steadiness, with offerings mostly in second hands.

California Almonds, shelled. 23 @ 26  
California Almonds, paper shell, # lb. 12 @ 14  
California Almonds, soft shell. 10 @ 12  
California Almonds, hard shell. 6 @ 7  
Walnuts, White, soft shell. 8½ @ 10½  
Walnuts, White, California, standard. 7½ @ 10  
Chestnuts, California Italian. — @ —  
Peanuts, California, fair to prime. 4 @ 5  
Peanuts, Eastern, hand-picked. 5½ @ 6  
Pine Nuts. 5 @ 6

## WINE.

The general features of the wine market remain practically as previously noted, there being a generally healthy tone, and any changes in quotable rates in the near future are more apt to be to firmer than to easier figures. For dry wines of this year's vintage, 15@20c per gallon continues to be the quotable range, as to quality and quantity. A sale of over 80,000 gallons Sonoma county wine is reported at 16½c, delivered at nearest railroad station, the wine being of good average quality.

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The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

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## Produce Receipts.

Receipts and exports of leading cereals and other California products for the past week and for the season to date, as compared with corresponding time the previous year, are as follows:

| FOR THE WEEK.            | Since<br>July 1, 1900. | Same time<br>last year. |
|--------------------------|------------------------|-------------------------|
| Flour, ¼ sacks. 25,485   | 3,189,176              | 2,790,116               |
| Wheat, centals. 31,955   | 3,032,175              | 2,314,912               |
| Barley, centals. 113,340 | 2,407,365              | 3,718,259               |
| Oats, centals. 3,790     | 440,186                | 511,511                 |
| Corn, centals. 5,805     | 64,320                 | 71,895                  |
| Rye, centals. 11,141     | 95,037                 | 81,587                  |
| Beans, sacks. 45,492     | 460,170                | 281,885                 |
| Potatoes, sacks. 4,519   | 835,096                | 619,019                 |
| Onions, sacks. 1,622     | 123,160                | 114,677                 |
| Hay, tons. 347           | 21,932                 | 35,120                  |
| Wool, bales. 117         | 5,861                  | 7,361                   |

## EXPORTS BY SEA.

| FOR THE WEEK.           | Since<br>July 1, 1900. | Same time<br>last year. |
|-------------------------|------------------------|-------------------------|
| Flour, ¼ sacks. 209,328 | 1,791,244              | 1,683,475               |
| Wheat, centals. 50,967  | 2,776,350              | 1,938,104               |
| Barley, centals. 72,509 | 1,466,285              | 2,915,623               |
| Oats, centals. 46,767   | 23,894                 | 8,814                   |
| Corn, centals. 1,524    | 8,112                  | 16,177                  |
| Beans, sacks. 195       | 79,324                 | 53,415                  |
| Hay, bales. 233,621     | 406,949                | 3,199,960               |
| Wool, pounds. 2,468     | 1,627                  | 612,046                 |
| Honey, cases. 813       | 51,888                 | 40,332                  |
| Potatoes, packages. 813 | 51,888                 | 40,332                  |

## California Dried Fruit at New York.

NEW YORK, Dec. 26.—Evaporated apples, common, 4@4½c; prime wire tray, 4½@5½c; choice, 5½@6c; fancy, 6½@7c.

California Dried Fruits.—Inactive, with values nominally unchanged.

Prunes, 3½@8½c.  
Apricots, Royal, @14c; Moorpark, 15@17c.  
Peaches, unpeeled, @6@9c; peeled, 16@20c.

## List of U. S. Patents for Pacific Coast Inventors.

REPORTED BY DEWEY, STRONG & CO.,  
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FOR PACIFIC COAST.

## FOR THE WEEK ENDING DEC. 11, 1900.

663,597.—BRAKE—H. C. Behr, S. F.  
663,558.—EYELET SETTER—S. W. Burtchall, S. F.  
663,733.—MILK BOTTLE—C. E. Crane, Seattle, Wash.  
663,603.—REVERSING GEAR—J. E. Doak, S. F.  
663,567.—PIPE WRENCH—P. Frichette, Sheridan, Cal.  
663,544.—PIPE CUTTER—J. S. Hill, Los Angeles, Cal.  
663,574.—FACE STEAMER—W. C. Keithly, S. F.  
663,551.—STREET SWEEPER—J. C. McCollum, Los Angeles, Cal.  
663,586.—BURGLAR ALARM—Jennie Simon, S. F.  
663,792.—CHERRY PITTER—E. H. Skinner, Springbrook, Or.  
663,837.—GAS PURIFIER—A. C. Swain, S. F.  
653,646.—FILTER—A. J. Tait, Oakland, Cal.  
33,712.—DESIGN—W. F. Clark, S. F.  
33,691.—DESIGN—J. Ewing, S. F.

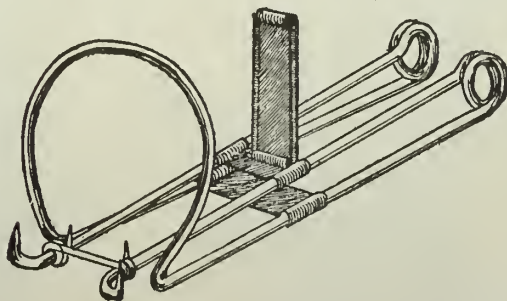
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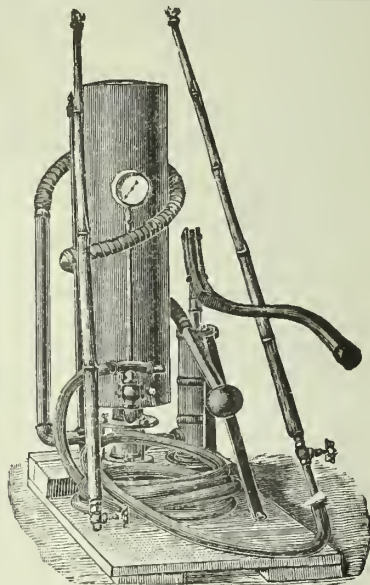
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